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A.M.A. PROGRAM FOR THE ADVANCEMENT OF MEDICINE AND PUBLIC HEALTH

Over a period of years the American Medical Association has advocated a program of advancement of medicine and public health, and through its own efforts and influence has striven to attain many of these aims and objectives. Varying degrees of success have resulted, but it is a well-established fact that the people of this country now enjoy the highest level of health and the finest standards of scientific care thus far achieved by any major country in the world. Aware of changing social and economic conditions, the A.M.A. from time to time has revised its program and added to it. Today, instead of the ten points that existed for a number of years, this program consists of twelve points, which will be found on page 173 of this issue.

A federal Department of Health of cabinet status, point one in the program, has been advocated by the A.M.A. for more than seventy-five years. In such a department could be coordinated and integrated all federal health activities except the military activities of the medical services of the armed forces. Recently a bill has been introduced in Congress (H. R. 782) which advocates the formation of a new executive Department of Public Welfare with a secretary of cabinet rank. It has been charged that the proposal would merely transform the Federal Security Agency into a Department of Public Welfare and that such a department would be given broad powers to deal with health, education, and social welfare matters. Spokesmen for the A.M.A. and other medical and dental associations have spoken against this bill and in favor of a cabinet agency set up solely as a Department of Health.

A bill intended to set up a National Science Foundation, the second point in the A.M.A. program, was passed in 1948 by both the Senate and the House but was vetoed by the President. There are bills pending before the present Congress of similar nature.

One of the strongest points in the twelve-point program is that urging the widest possible extension of sound systems of voluntary prepayment plans to meet the cost of hospital and medical care. It is the one point which, according to the campaign managers of the

National Education Campaign of the A.M.A., is the most needed to defeat the compulsory health insurance plan of the present administration. A recent editorial appearing in *The Journal of the American Medical Association* admits that

"Much confusion has resulted from differences of opinion as to how such extension could be best achieved, whether by a national insurance company, which would combine Blue Cross and Blue Shield plans, or by a coordination of voluntary and private prepayment plans into a single organization which would contract with the Blue Cross for various services."

The editorial goes on to point out, however, that during the preceding week extensive negotiations had been held among those especially interested in this phase of the problem and that steady progress is being made toward a mutually satisfactory solution. The entire problem of voluntary health insurance will be discussed in an early issue of the JOURNAL.

The fourth point in the program, the establishment in each state of a medical care authority, is advocated for the purpose of helping to meet the problems of persons in low-income groups and of the indigent in receiving assistance from the individual states and from the federal government without the establishment of a new bureaucracy or the nationalization of health activities. This proposal would provide for the establishment of a medical care authority or board which could receive such funds and distribute them where the need could be shown. The A.M.A. recognizes the right of the consumer in planning for medical care and urges proper representation on such boards of both medical and consumer interests.

The need in rural communities particularly and in other remote areas of the country for the establishment of diagnostic facilities and health centers necessary to attract physicians sufficient to serve the communities is pointed out in the fifth point of the program. This and other health needs of rural communities were emphasized in Chicago recently at the Fourth Annual Conference on Rural Health. The A.M.A. Committee on Rural Health, headed by Dr. F. S. Crockett, Lafayette, Ind., at that time adopted an eleven-point program which is discussed elsewhere in this issue of the JOURNAL (page 172).

The need for the expansion of public health facilities to every section of the country to provide the essential public health services in every county and the need for the development of programs of mental hygiene and of health education to serve the people are acknowledged and advocated in the next three points of the program. These points are all in keeping with the policy of the A.M.A. as elaborated by the House of Delegates for the last number of years, but the results of investigations made in recent years indicating that psychiatric problems are coming rapidly to the fore as the primary cause of disability and illness make the need for a more comprehensive mental hygiene program an important phase of this overall program.

So far as can be determined no proposed legislation now pending before Congress would provide for medical care for the aged or those suffering from long-standing chronic diseases or certain underprivileged groups in the population. These groups have received comparatively little attention previously and would not be particularly benefited even with compulsory health insurance as advocated by the present administration of the federal government. They must, however, be considered in an overall program and are specifically mentioned in the ninth point. The Board of Trustees of the A.M.A., carrying out this objective of the program, has made available $25,000 to create a Commission on Chronic Illness. This sum, drawn from the National Education Campaign fund, has been allotted to the Interim Commission on Chronic Illness, which will set up the permanent commission. The Interim Commission was established through the cooperation of the American

Medical Association, American Hospital Association, American Public Health Association, and the American Public Welfare Association as an outgrowth of recommendations from the Section on Chronic Disease of the National Health Assembly in Washington last year. More about the objectives and plans of this commission will be published in a future issue of the JOURNAL.

The Veterans Medical Care Program, though first intended primarily to assist those who suffered disabilities as a result of service-connected injuries or illnesses, has become such a mammoth program with vast hospital facilities far in excess of the needs of those with service-connected disabilities that it has been a subject of considerable interest to the House of Delegates of the A.M.A. for several years. More recently the Hoover Commission and other governmental agencies have become concerned with the vast wastefulness which prevails in medical care under federal auspices. Duplication of medical facilities by the Army, Navy, and Public Health Service as well as the Veterans Administration are evident, and the losses occurring from this duplication are coming to the attention of the public. It should be pointed out that the armed services have recently been making an effort to abolish waste of professional personnel and of facilities for medical care so far as possible by combining certain medical activities and eliminating others to avoid duplication. Credit must also be given to the Veterans Administration, which has reevaluated its hospital program and has recently cancelled plans for twenty-four new hospitals and reduced the size of fourteen others. The tenth point of this health program, indicating that a problem still exists, provides for the integration of veterans medical care and hospital facilities with other medical care and hospital programs and for the maintenance of high standards of medical care including care of the veteran in his own community by a physician of his own choice. A program of this nature should go a long way in preventing much of the wastefulness in medical care under federal government auspices.

Today the fourth in the list of causes of death in the nation as a whole is accidents, and between 10 and 15 per cent of all hospital beds are now occupied by victims of accidents. More emphasis is needed on safeguards against industrial hazards and accidents of all kinds and special emphasis needs to be given to a program of industrial medicine, as indicated in the eleventh point.

The costs of modern medical education have risen greatly and the need for additional doctors, particularly in the rural areas, is generally realized by the medical profession. To retain the high standard of medical care which this nation has achieved and to train adequately a sufficient number of physicians, dentists, and nurses and personnel accessory to the medical profession will require the provision of additional funds for medical schools and other educational institutions, as advocated in the twelfth point. It is expected that state governments will do more for their medical schools than they have done in the past and it is possible that some federal funds may be needed also, but whenever governmental funds are used they must be employed under some system that will make their use free from political control, domination, and regulation by governmental agencies. There are many medical schools and other institutions of learning related to medical care which should not have to depend upon government subsidy and for which voluntary funds will be needed. A voluntary foundation is in the process of development at this time in order to secure some additional funds for these purposes.

As it is brought out in the A.M.A. editorial previously referred to:

"This program is far more comprehensive than any yet proposed by either the President of the United States or the Federal Security Administrator. It has the advantage that it can be developed and

administered as a logical evolution from the existing institutions in the United States without bringing about chaos through a complete overthrow of what has already been admitted by every one to be the highest quality of medical care available in any country in the world."

NATIONAL EDUCATION CAMPAIGN

In keeping with resolutions passed by the House of Delegates of the American Medical Association at the interim session at St. Louis and in order to implement the program which was outlined in principle at that meeting, a committee known as the Coordinating Council and composed of officers and trustees of the Association with three representatives of the House of Delegates was formed and the Whitaker and Baxter Public Relations Firm was employed.

This Coordinating Council, realizing the immensity of its task and the need for complete cooperation from all of the component state medical associations, asked that an advisory committee consisting of one representative from each state and territorial medical association be formed. This committee is known as the Committee of Fifty-Three Physicians; the State Medical Association of Texas is represented by Dr. George A. Schenewerk, Dallas, chairman of its Committee on Public Relations. The Committee of Fifty-Three Physicians met with the Coordinating Council and Clem Whitaker and Miss Leone Baxter, members of the public relations firm, in Chicago on February 12, at which time plans for the entire campaign were discussed and approved.

Known as the National Education Campaign of the American Medical Association, and with Mr. Whitaker and Miss Baxter as directors, the purposes of this campaign are twofold: (1) It is an affirmative campaign with the defeat of compulsory health insurance as the immediate job, but stopping the agitation for compulsory health insurance by enrolling the people in a sound voluntary health insurance system as its most important objective. (2) It must be a broad public campaign with leaders in every walk of life participating, but the work of getting the people alerted and recruited for the battle is the responsibility of the doctors and their lay representatives.

The organization for the National Education Campaign of the A.M.A. is headed by the Coordinating Committee under the leadership of Dr. Elmer L. Henderson, chairman of the Board of Trustees. This committee is the policy-making board and is charged with the overall responsibility for the conduct of the campaign. The campaign directors are responsible to the Coordinating Committee. This committee in turn is responsible to the House of Delegates. Each state and territorial medical association is expected to organize its own portion of the campaign with each county medical society as an integral unit. Each state association appoints its own state campaign chairman and Dr. Schenewerk has been given this assignment for Texas. The campaign strategy in general, the national publicity program, and the production of basic campaign literature and other materials are largely the task of the national headquarters. Each state is being asked, because of varying local conditions, to work out its own campaign structure and the relationship between the state and the county societies in the conduct of the campaign.

The four major activities which should be incorporated in any state or local campaign are essentially these: (1) an effective endorsement drive; (2) an intensive publicity campaign; (3) an organized, adequately staffed, pamphlet distribution system; and (4) an energetic, carefully managed speakers bureau. The details of carrying out these four essentials are being worked out from the state level at this time and each member of this Association will be called upon to do his share.

The individual doctor's job in this campaign is of paramount importance. The A.M.A. and state and county medical societies can provide

an effective framework for the campaign, but every doctor who values his freedom in practice needs to work at keeping that freedom by crusading every day of the week. Every doctor needs to talk to every patient who is able to listen and tell him the truth about political medicine—how it destroys the quality of medical care; how it breaks down the physician-patient relationship; how it raids the pocketbook of every taxpayer; and how it threatens personal freedom. He needs also to encourage his patients to get good, sound, voluntary health insurance for their own protection and the protection of their families.

Because this campaign is primarily for the benefit of the American people and is being waged in order that they may continue to enjoy the highest level of health, the finest standards of scientific medical care, and the best quality of medical institutions thus far achieved by any major country of the world, it deserves the wholehearted support and the active participation of every physician of this state and of the entire citizenship as well.

LEGISLATIVE PROGRESS

The Minimum Standards Bill, supported by the State Medical Association of Texas and which, if passed, will assure the people of Texas of competence in the sick room, seems a step nearer reality having cleared the early obstacles of committee hearings in both the House of Representatives and the Senate of the Fifty-First Legislature.

After introduction of the bill in the Senate by Senator Walter Tynan of San Antonio on Monday, January 17, with Senators Kilmer B. Corbin of Lamesa, W. A. Shofner of Temple, and George Moffett of Chillicothe as co-sponsors, the bill has been the topic of much activity in both houses of the Legislature.

Representative Ed Hughes of Newton introduced the bill into the lower house on February 6, after Senator Pat Bullock of Colorado City had introduced in the Senate a chiropractor licensing bill as an answer to the Minimum Standards Bill.

A crowded gallery was on hand for the public hearing on the Minimum Standards Bill before the Senate committee on public health Wednesday night, February 16. At the close of the hearing, the bill was approved by a vote of 6 to 4, which action sent the measure to the Senate calendar with a recommendation for passage.

Those on the Senate public health committee voting for the bill were Senators Tynan of San Antonio, Gus J. Strauss of Hallettsville, R. A. Weinert of Seguin, W. A. Shofner of Temple, Rogers Kelley of Edinburg, and Kilmer B. Corbin of Lamesa.

Committee members voting against the measure were Senators R. L. Proffer of Justin, Dorsey B. Hardeman of San Angelo, Jimmy Phillips of Angleton, and Pat Bullock of Colorado City. Senator John Bell of Cuero, chairman of the committee, did not vote.

Representative Carleton Moore of Houston introduced a bill to license naturopaths amidst all this "basic science" controversy. There was an attempt to delay the public hearing before the House public health committee on the Minimum Standards Bill during the session on February 17, but proponents of the Minimum Standards Bill won that round and the public hearing was held the afternoon of February 24.

The night before the House public hearing, however, the hearing in the Senate was held on the chiropractor licensing bill, and there Dr. J. B. Copeland, chairman of the State Medical Association Council on Legislation, made news by announcing that the Association will recommend licensing of chiropractors, providing the Minimum Standards Bill is passed first.

Then on Thursday, February 24, several hundred spectators again witnessed the hearing on minimum standards, this time in the House of Representatives, and after more than four

hours, the bill was passed from the committee to the floor with a 13 to 6 favorable vote.

House committee members voting to recommend passage of the act were Representatives Ed Hughes of Newton, Wayne Wagonseller of Fruitland, Tom Whiteside of Tyler, Vernon McDaniel of Wichita Falls, John B. McDonald of Neches, William S. Jameson of El Paso, Abraham Kazen of Laredo, James B. Pattison of Pattison, Arnold J. Vale of Rio Grande City, Paul Wilson of Geneva, Frank Oltorf of Marlin, Lamar Zivley of Temple and C. W. Woods of Crockett.

Those members of the House public health committee opposing the Minimum Standards Bill were Representatives A. Robin Henderson of Groesbeck, Surry Turner of Gilmer, Miller Walker of Beaumont, Johnnie B. Rogers of Austin, Deno Tufares of Wichita Falls, and W. H. Rampy of Winters.

The Minimum Standards Bill figured in a surprise move in the House of Representatives on Thursday, March 3, when Representative Sam Hanna of Dallas brought the bill to an unscheduled test by making a motion that the measure be referred to the House committee on livestock and stock raising, which would delay the bill in reaching the floor of the House for vote. Defeated by a vote of 72 to 56, Hanna said at the time that he thought the measure should be gone over more thoroughly; his move was branded as a left-handed attack against the bill.

The bill will probably be brought before both houses within the next few weeks. A list of the complete membership of the House and the Senate appears on page 166 of this JOURNAL, and members of the State Medical Association are urged to keep informed concerning the movements of the bill and to keep in contact with their legislators. They should also remember to thank their friends on the public health committees for their stand in support of the Minimum Standards Bill.

Current Editorial Comment

PREVENTION OF BLINDNESS IN CHILDREN

Recently Dr. Franklin M. Foote, executive director of the National Society for Prevention of Blindness, stated in a newspaper release that "the eyes of one out of every five school children are defective." This percentage is exaggerated if a survey taken a few years ago of all the school children of one of the large Texas cities is any criterion. However, there is no doubt but that many school children have defective vision and that parents should pay more attention to improper lighting, frequent blinking of lids, cross eyes, and other complaints that the child may make in regard to his eyes, and have the condition properly investigated by a competent ophthalmologist.

A recent survey made in the Texas School for the Blind revealed too many cases of certain conditions in which proper medical attention has been lacking. The survey indicated that such diseases as trachoma, interstitial keratitis, sympathetic ophthalmia, and ophthalmia neonatorum decreased markedly as a result of the newer drugs and antibiotics. The number of congenital conditions such as microphthalmia, congenital cataract, and albinism more or less followed a normal base line which will probably remain unchanged until eugenics gains more acceptance and rational application.

There are two conditions which can be helped materially if detected early, and the responsibility for detection falls upon the obstetrician, the general practitioner, and the pediatrician. These two conditions are (1) congenital cataract and (2) juvenile glaucoma.

This department of the JOURNAL *presents editorial comments on current items pertaining to the science, art, and practice of medicine, contributed by members of the State Medical Association and scientists closely associated with the medical profession of Texas. Invitation is hereby extended to any member of the State Medical Association of Texas to submit such discussions for this department. The discussions should not be more than 500 words in length.*

Congenital cataract is not always easy to detect since the cataract may be extremely small, but many patients show that the visual perception is defective and the cataract can be seen with the unaided eye. Early surgery is the procedure of choice. There is considerable controversy as to the exact age a child should be before surgery is performed. Owens and others recently reported a large series of cases from the Wilmer Institute and stated that better results were obtained if surgery was postponed until after the patient was 2½ years old. Others advocate operation within the first twelve to eighteen months after birth.

Juvenile glaucoma, buphthalmos, or hydrophthalmos must be recognized early and surgery performed as soon as possible after the diagnosis is made if satisfactory results are to be expected. Ordinarily, the diagnosis can be made over the telephone since the child with glaucoma has large, beautiful eyes, much larger and more prominent than other children of the same age. He is unusually sensitive to light and keeps his head buried in a pillow or stays in a dark room constantly, in spite of the fact that the eyes are not inflamed or irritated. Occasionally, the mother has noticed that the cornea has developed a white spot and appears steamy overnight. These cases must be operated on early, and the two best procedures are goniotomy and cyclodialysis.

If juvenile glaucoma is not recognized early, each eye continues to enlarge until the globes resemble ox eyes, and the vision decreases progressively. If surgery is postponed until the patient is 3 or 4 years of age, the condition becomes hopeless and blindness ensues.

If all physicians who treat infants will look for and recognize ocular defects, there will be fewer totally blind children.

HENRY L. HILGARTNER, M. D., Ophthalmologist,
Texas School for the Blind,
Austin, Texas.

202 West 13th Street.

DALLAS HEALTH MUSEUM

March 25 to April 9 have been designated as the dates for the Dallas Health Museum 1949 fund drive. Friends of the museum have been requested by Travis Wallace, president, to renew their contributions during this period. He also urges the continued assistance of those who have supported the museum in its activities throughout the past year.

During 1948 the museum has added to its services and among those now being offered are a radio program and a free Diabetes Detection Center. The public service radio program, which took to the air November 5, publicizes current exhibits and activities at the museum in addition to supplying timely health hints. The program is broadcast each Friday from 6:15 to 6:30 p. m. over station WFAA-570. The Diabetes Detection Center, opened in observance of National Diabetes Week, was planned to operate only during Diabetes Week, but it proved so popular that it will be open each Saturday and Sunday from 2 to 5 p. m. indefinitely. More than 450 free diabetes tests have been processed by the center, and of this number 39 potentially diabetic persons have been discovered and referred to their family physicians for further examination. Cooperating in the sponsorship of the center are the Texas Diabetic Trust Fund, the Dallas Diabetes Association, Southwestern Medical College, and the City Union of the International Order of the King's Daughters and Sons.

In addition to the fund drive, museum officials have announced that nominations for the 1949 Dallas Health Museum Award are now open and will be accepted until April 15. The award, given annually to the individual or group in Texas judged to have made the most outstanding contribution to better community health, is presented at the annual session of the State Medical Association. Nominations should be submitted to the museum for review by a board of judges appointed by museum officials.

Since beginning operations on a seven day week basis February 1, 1947, the museum has grown steadily in attendance, service to the public, and caliber and number of exhibits. Although in 1947 it drew a total of 162,243 visitors, in 1948 attendance reached 192,513.

Texas Health Resorts Approved

Of the four health resorts in the United States which have been accepted for listing by the Committee on American Health Resorts of the Council of Physical Medicine, American Medical Association, two, The Baker at Mineral Wells and Torbett Health Resort at Marlin, are in Texas.

CORRECTION

The table published on page 94 of the February issue of the JOURNAL as a part of the article entitled "Subacute Bacterial Endocarditis; Laboratory Aspects" by Dr. Hugh Reveley contained two misplaced decimal points. The correct table is as follows:

TABLE 1.—*Suggested Dose of Penicillin Based on Sensitivity of Organism.**

Penicillin Sensitivity (unit/cc. of medium)	Daily Dose by Constant Drip (units)	Average Serum Level (unit/cc. of serum)
.025 or less	500,000	.2
.1	1,000,000	.56
.5	2,000,000	1.6—2.24
1.0	5,000,000	3.2
5.0	10,000,000	6.66

*Modified after Dawson and Hunter.[3]

Original Articles

ETIOLOGY AND TREATMENT OF OPTIC NEURITIS

WILLIAM L. BENEDICT, M.D., Section on Ophthalmology, Mayo Clinic, Rochester, Minnesota

THE rapid loss of vision in amounts varying from slight loss to complete amaurosis in one or both eyes is the outstanding indication of optic neuritis. The pathologic lesion which causes the blindness is situated in one or both of the optic nerves or the chiasm. The lesion of the nerves may be only a part of a more general disease of the central nervous system. Its approximate location can be determined by ophthalmoscopic examination and charting of scotomas. Optic neuritis occurs as an isolated manifestation of disease of the nervous system or as a complication of some focus of acute infection or chronic systemic disease. The history of the onset and progress of visual disturbance, together with other signs and symptoms of disease of the central nervous system or chronic systemic disease, is important in the diagnosis.

ETIOLOGY AND DIAGNOSIS

Among the causes of optic neuritis, although not named to indicate order of frequency, are multiple sclerosis, Schilder's disease, sinus disease, neoplasms, aneurysms, metabolic diseases, and toxic substances such as alcohol, tobacco, lead, quinine, arsenic, and thallium. Demyelinating diseases of the brain and visual pathways account for the majority of instances of retrobulbar neuritis. Among these diseases classified as "encephalomyelopathies" are multiple sclerosis and Schilder's disease. The early symptoms of multiple sclerosis, such as failing vision, paresthesia and numbness of the extremities, general weakness, and often mental or emotional instability are sometimes accompanied or preceded by transient blindness and partial paralysis of some of the ocular muscles. These symptoms are not pathognomonic since one or more of them are found in other types of encephalomyelopathy.

Multiple Sclerosis

Among the ocular symptoms of multiple sclerosis, scotomas and diplopia are outstanding. In 15 per cent of more than 500 cases of multiple sclerosis observed at the Mayo Clinic, disturbance of vision was given as the first episode. In an additional 40 per cent disturbance of vision occurred sometime during the course of the disease. In the majority of cases of optic atrophy due to multiple sclerosis only one eye is affected. The onset of blindness is preceded or accompanied by supra-orbital pain in the majority of the cases, although in many severe episodes of retrobulbar neuritis of multiple sclerosis there is no accompanying pain. The attacks of blindness are not usually associated with colds or upper respiratory or other acute infections. Although recurrent attacks of blindness are not uncommon as isolated symptoms in multiple sclerosis, systemic symptoms of the disease are more likely to develop or recur with increasing frequency.

As the lesion which causes optic neuritis of multiple sclerosis often is situated in the posterior part of the optic nerve, the ophthalmoscopic appearance of the nerve head during an attack is usually normal. The condition, therefore, is referred to as "retrobulbar neuritis." If the lesion is situated near the optic disk, signs of involvement of the anterior part of the optic nerve such as increased redness or slight blurring of the disk margins will indicate the situation of the lesion. Marked papilledema is not often associated with the optic neuritis of multiple sclerosis, but swelling of the disk to as much as 4 diopters has been noted in some cases. In an average of about 12 per cent of an authentically reported series of cases, blurring of the disk occurred.

In most cases of retrobulbar neuritis of multiple sclerosis, recovery of vision begins within five to seven days after the onset of amaurosis. In most such cases complete recovery of vision can be expected. In many cases, however, vision is only partially restored and small central or paracentral scotomas may remain permanently.

A second or third attack of blindness affecting either the same or the other eye or both eyes may be experienced before any other evidence of multiple sclerosis appears. However, a tingling sensation in the

Read before the Section on Eye, Ear, Nose, and Throat, State Medical Association of Texas, Annual Session, Houston, April 27, 1948.

extremities and numbness of the feet, legs, arms, and hands, with or without repeated attacks of dizziness, vomiting, urinary incontinence, and the like, are more likely to occur before a second episode of retrobulbar neuritis.

Retrobulbar Neuritis

Unilateral blindness without some other discernible cause may properly be ascribed to retrobulbar neuritis. In young persons the most likely cause is multiple sclerosis, as the incidence of multiple sclerosis is more frequent in persons who are less than 40 years of age than among older persons. Unilateral blindness in a person past middle life is probably due to a cause other than multiple sclerosis. Arteriosclerosis and diabetes account for a large number of these cases. Acute onset of unilateral retrobulbar neuritis often has been attributed to disease of the paranasal sinuses without other signs or symptoms. During the past twenty years, however, few authenticated cases have been reported. While some improvement in vision may follow opening the sinuses during an attack of blindness, the fact that vision is recovered is not proof that blindness was brought about by a disease of the sinuses.

Differential diagnosis between optic neuritis and retrobulbar neuritis is made ophthalmoscopically. The distinction is made by the location of the lesion along the nerve. The reason for making the distinction is that only certain etiologic factors need be considered in retrobulbar neuritis. For instance, only the retrobulbar type of neuritis results from pressure on the optic nerve or the chiasm from pituitary tumors or aneurysms of the circle of Willis and from localized inflammatory processes in the nerve remote from the disk. In the active phases of optic neuritis, however, either ischemic papilledema or true papillitis of the nerve head may be noted. Either type of change in the nerve head may be accompanied by edema of the surrounding retina with venous engorgement and generalized retinal arteriolar narrowing.

In retrobulbar neuritis the disk has a normal appearance for several days after the onset of the blindness but finally pallor of the temporal half of the disk appears. The retinal vessels maintain a normal appearance and the visual fields may return to normal in spite of the pale appearance of the nerve head. The pallor of the nerve head is attributed to a permanent constriction of the terminal vessels in the nerve. If the pallor of the temporal side of the disk is associated with a loss of nerve substance, indicating atrophy of the optic nerve, there is little likelihood of complete restoration of vision. Atrophy of the nerve, however, is not common after the primary episode of retrobulbar neuritis of multiple sclerosis.

Alcohol and Tobacco Poisoning

Although most frequently caused by multiple sclerosis, retrobulbar neuritis may be due to a number of other factors. Chronic alcohol or tobacco poisoning affects not only the optic nerve but the retina as well. The primary damage by methyl alcohol is said to occur in the ganglion cells of the retina. As a rule, both eyes are affected at the same time and to an equal extent. The acute blindness of methyl alcohol often leads to permanent blindness, while amaurosis from chronic ethyl alcohol and tobacco poisoning usually begins to diminish shortly after ingestion of these toxic substances is interrupted.

Reports of recovery of vision lost probably as a result of chronic alcoholism without any decrease in the intake of alcohol have been published. In these cases part of the blindness may be attributed to starvation or at least diminished intake of certain vitamins. This theory is supported by the reports of gradual onset of blindness among prisoners of war who were compelled to exist on highly deficient diets for several months. The fact that in cases of alcohol poisoning vision is improved after the ingestion of large amounts of mixed vitamins is, of course, the best proof that the loss of vision is the result of malnutrition rather than toxemia.

The case for tobacco amblyopia is not so clear. Retrobulbar neuritis with characteristic onset and course of toxic amblyopia has been seen in persons who have used large quantities of tobacco and little or no alcohol for a long time. Recovery of vision in such cases is not brought about by ingestion of vitamins alone but has occurred only after use of tobacco has been discontinued.

Plumbism

The importance of plumbism as a cause of retrobulbar neuritis has not been sufficiently stressed. There are many reported cases of lead poisoning among children, due to ingestion of lead from painted toys and furniture and to absorption from household appliances and utensils containing lead. Small amounts of lead are usually tolerated by children and adults without symptoms. Under ordinary conditions of health the lead is immobilized in the skeletal system where it remains relatively harmless. However, the lead held in the skeletal system is liberated during fever and conditions that are characterized by deficiency of calcium in the diet and is thrown into the blood stream in quantities sufficient to affect seriously the nervous system and the blood. Amaurosis and other nervous symptoms may result from comparatively small amounts of lead in the blood and urine. Before the lead line appears in the gums or before noticeable stippling of the erythrocytes appears, there may be serious inroads on visual acuity.

A child who became blind within a few days after recovery from an attack of measles was found to have enough lead in the urine to indicate toxemia. The child lived in a house that had lead plumbing. As long as her health was good, she was able to take care of the lead ingested, but during the fever in the course of measles the lead was freed from the skeletal system.

Provocative tests for lead may be made by administration of alkaline substances, such as ammonium bitartrate. In any case of optic neuritis or retrobulbar neuritis, lead poisoning should be suspected and a test of the urine for lead should be made.

Chronic Diseases

Of the chronic infectious diseases that cause optic neuritis and retrobulbar neuritis the most common offender is syphilis. Optic neuritis occurs as a complication of the second or papillary stage. With vigorous treatment recovery of vision may be expected in a great majority of cases. In the primary optic atrophy of neurosyphilis, however, loss of vision is permanent. Since the introduction of more effective treatment of syphilis, ocular complications of syphilis are rarely seen. A generation ago syphilis was presumably responsible for more cases of optic neuritis and optic atrophy than all of the other chronic infectious diseases. The incidence of syphilitic optic neuritis is now so low that even in a large clinic it is considered rare. Primary optic atrophy due to syphilis of the central nervous system may be a late complication and is known to occur fifteen or twenty years after the initial lesion. When it does occur in the late stages of neurosyphilis, optic atrophy does not yield satisfactorily to treatment.

Optic neuritis develops in cases of chronic diabetes and advanced vascular changes. The most significant changes in the retina or optic nerve in cases of diabetes occur among persons who have had diabetes for several years and in whom the disease has presumably been controlled by insulin. The vascular changes in diabetes are not altered by control of the sugar metabolism or by any form of therapy. Optic neuritis which is due solely to the changes of diabetes does not respond to any form of treatment and gradually leads to complete loss of vision. Besides the changes in the optic nerve, there are, of course, extensive changes in the retina which are responsible for a certain portion of the visual loss.

Optic neuritis is seen occasionally in cases of advanced arteriosclerosis and may be attributed solely to that vascular disease. Among other conditions to which optic neuritis and retrobulbar neuritis have been attributed are congenital amblyopia, postpartum hemorrhages, familial causes, arterial spasm, and pituitary tumor.

Review of Literature

A statistical review of cases of optic neuritis and retrobulbar neuritis gathered from reports from the literature indicates that more than half of the cases of retrobulbar neuritis and a large percentage of the cases of optic neuritis are due to multiple sclerosis. Other diseases of the central nervous system from which multiple sclerosis must be differentiated include Schilder's disease, meningitis, and encephalitis. These diseases account for a comparatively small number of cases of optic neuritis or retrobulbar neuritis. Tumors of the pituitary body and aneurysms of the circle of Willis account for a larger number of cases of retrobulbar neuritis than has been suspected heretofore. Low-grade inflammatory lesions about the optic chiasms, such as follow subdural hemorrhage and skull fracture, which result in chiasmal arachnoiditis, are being reported in increasing numbers.

In general it is considered that primary affections of the nervous system are causes of optic neuritis. In this group are considered multiple sclerosis, myelitis, syphilis, drug poisoning, and Schilder's disease. The cases of optic neuritis due to alcohol and tobacco form a distinct group. The use of alcohol or nicotine alone is known to provoke optic neuritis. It is generally accepted that amblyopia from alcohol or tobacco is a deficiency disease. Optic neuritis of a similar character appears in persons receiving deficient diets who have not had access to alcohol or tobacco. The optic neuritis and amaurosis that follow starvation alone in the absence of excessive use of alcohol and tobacco, however, do not respond to administration of vitamins in the diet as does the amblyopia in which alcohol and tobacco have been important etiologic factors.

Occasionally optic neuritis that more nearly resembles the amblyopia seen in starvation occurs in association with menstruation, pregnancy and lactation, chronically cachectic conditions of protracted diseases, pernicious anemia, diabetes, and other metabolic disorders. Undoubtedly there are many cases of optic neuritis and retrobulbar neuritis due to malnutrition which are attributed to some other cause. Furthermore, there are some cases that must be attributed to toxic conditions owing to foci of infection, exposure to industrial chemical compounds, congenital causes such as Leber's disease, sinus disease, and vascular spasm.

TREATMENT

The treatment of retrobulbar neuritis should be instituted as soon as the diagnosis can be confirmed and should be continued as long as there is any hope of further recovery of vision.

Multiple Sclerosis

Inasmuch as the primary diseases of the central nervous system, particularly multiple sclerosis, do not respond well to treatment, there has been a tendency to minimize general treatment in cases of retrobulbar optic neuritis. It is well known that in the majority of cases of blindness due to multiple sclerosis full vision returns within three weeks from the date of the onset of the amblyopia. However, in many cases the recovery is retarded and even after six to eight weeks a portion of the visual field is obscured by central and paracentral scotomas. Since retrobulbar neuritis is due to multiple sclerosis in more than half of the cases, treatment of retrobulbar neuritis due to this condition deserves more attention.

The onset of blindness in a typical case of multiple sclerosis is accompanied by symptoms of toxemia, pain about one or both eyes, dizziness, and malaise. As a rule these symptoms subside after about five days. The time from the onset of visual disturbance until complete amaurosis occurs varies from two to four days. During this period there is no response to treatment. The patient, however, should be restricted to bed and protected from cold, intercurrent infection, and bodily fatigue.

The most effective treatment is administration of foreign protein. The intravenous injection of sufficient typhoid vaccine to give a thermal reaction of 101 to 102 F. is the only treatment required. Administration of the typhoid vaccine on the first day of visual disturbance has not been effective in altering the course of blindness. However, if it is given on the fifth day of visual disturbance or thereafter, recovery from the blindness is more rapid and more complete among treated than untreated patients.

After recovery of normal visual acuity, treatment may be discontinued because immediate relapses are practically unknown. The treatment should be continued in all cases in which recovery is slow, and in cases of incomplete recovery of vision the treatment should be continued for at least one week after no further improvement is noted.

A presumptive diagnosis of multiple sclerosis as a cause of retrobulbar neuritis is all that can be made in many cases. However, when all other probable causes of blindness have been ruled out by careful investigation, multiple sclerosis may be presumed to be the offending condition. The clinical course of retrobulbar neuritis due to multiple sclerosis is so characteristic that on the history alone the other probable causes of neuritis may be ruled out.

In the case of chiasmal arachnoiditis, aneurysm of the circle of Willis, and tumor of the pituitary, some characteristic features of the visual scotomas usually point to a cause other than multiple sclerosis. In such cases the loss of visual fields progresses in a characteristic manner from the outside inward while in multiple sclerosis the central scotoma is usually the first to appear. The scotoma spreads from the central field to the periphery and recovery occurs in the reverse manner. If the blindness is due to some disorder of the central nervous system other than multiple sclerosis, for instance pressure on the chiasm, treatment will not aid in the recovery of vision.

No other form of medical treatment is as effective in bringing about recovery of vision in cases of optic neuritis as foreign protein therapy and this has now replaced practically all other forms of medical treatment. Surgical intervention is indicated only when it becomes clear that the optic neuritis cannot be attributed to an inflammatory, degenerative, or toxic disease but must be ascribed to such organic changes as tumors, aneurysms, hemorrhages, and injuries along the visual pathways.

Toxic Conditions

The importance of treatment in most cases of optic neuritis is sufficient to warrant hospitalization. Chronic optic neuritis following alcohol, tobacco, and other toxic conditions may be treated with one or more of the vasodilating drugs, such as nitroscleran, padutin, papaverine, and some forms of nitrites. In cases of incomplete recovery of vision this medication may be continued for months, as long as there is a little sign of improvement. The pharmacologic effect of these substances may not be clear; nevertheless, clinical experience has justified their administration for a longer time than they have usually been employed. The nonspecific effect of foreign proteins may be attributed to vasodilatation, but the clinical response to intravenous administration of typhoid vaccine is so marked compared to response to other forms of medication that it should be the choice in all acute cases.

Whatever the cause may be in a single case of optic neuritis, the chances of recovery are enhanced by the eradication of foci of infection, withdrawal of all toxic substances such as alcohol and tobacco, and avoidance of physical fatigue. Under hospital care attention should be given to diet and elimination. The role of vitamin B_2 in diseases of the eye is sufficiently well known to warrant the addition of generous amounts to a diet in any case of optic neuritis.

The treatment of optic neuritis due to lead poisoning depends on the quantity of lead in the blood and urine. In an acute case the immediate immobilization of the lead is important. This may be accomplished by the oral administration of calicium lactate. Drinking of milk is also helpful. In the long run the lead must be removed from the skeletal system and fortunately its removal can be achieved under control by use of ammonium bitartrate in graduated doses,

alternated, if necessary, with doses of calcium, for the lead follows the calcium from the blood to the bones or vice versa quickly and completely.

Advanced optic neuritis of diabetes and arteriosclerosis, unfortunately, does not yield to therapy and almost invariably leads to optic atrophy and blindness.

SUMMARY

Optic neuritis and retrobulbar neuritis are produced by a variety of causes, chief of which are multiple sclerosis, other organic disorders of the central nervous system, alcohol, tobacco, lead, and chronic metabolic diseases. The results of treatment vary with the cause of blindness but in most cases in which the condition is at all susceptible to therapy the treatment should be begun early and continued as long as there is any sign of improvement. Surgical intervention should be limited to exposure of the optic nerves by transcranial approach in selected cases. Ablation of the paranasal sinuses is rarely indicated.

THE SENILE CATARACT PATIENT

A Pattern for Surgical Management

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THIS presentation is based on an analysis of 246 case records of our private patients operated on at the Memorial and Methodist Hospitals in Houston during the last three years, and on 229 records of the Jefferson Davis Hospital during the same period. As Benedict[4] pointed out, statistical studies are colored by the personal element of the surgeon, and their applicability to general deductions is therefore limited. The analysis of this material is made not in the delusion that it will solve any surgical problems, but in the hope that it may serve as a framework for the development of the individual ingenuity of ophthalmic surgeons.

The patient who complains of foggy vision interfering with the enjoyment of reading or sewing usually comes in search of better glasses. The discovery of lenticular opacities and the prospect of having to disappoint the patient raise a problem of psychologic import. How should the ophthalmologist convey the disturbing information to the patient without upsetting him emotionally? Members of the family frequently ask that the patient not be told if any pathologic condition is found. In our experience the confidence of the patient is held better if he is told the truth. Persons who are as old as cataract patients usually are have learned to adjust to and accept the inevitable tribulations of life. If the patient is told that he has a condition which is incident to age and which, fortunately, can be relieved at his choice by a comparatively safe surgical procedure, he is upset much less than if he is left with the feeling that either the ophthalmologist has not discovered the source of his difficulty or the condition is so grave he must be spared the shock. The assurance that vision can be restored at any time and that a period of blindness is not obligatory is often of itself a sedative to the patient's emotional morale and an effective brake on the fear of blindness.

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INDICATIONS FOR SURGERY

The next question which arises is the indication for surgery or medical therapy. In spite of many hopeful attempts at medical treatment of cataract, a medical cure still appears to be hidden in the invisible future. Today there is perhaps no more satisfying surgical procedure than a cataract extraction, which improvements in technique have made reasonably safe.

Surgical indications for a cataract extraction no longer have any relation to the state of maturity of the cataract. It seems to us that cataracts should no longer be divided into mature or immature, but into operable or inoperable phases. When the cataract is mature, information on the state of the lens is limited to the anterior cortex. The posterior cortex, which is invisible, may be transparent, and because of its close attachment to the capsule, may in case of extracapsular extraction remain in the eye. This is the reason that in the extraction of some apparently mature cataracts the ophthalmologist sometimes finds a considerable amount of retained soft lens cortex. The operability of an immature cataract should be determined by the patient's visual requirements and the probable outcome of surgery. The patient's visual needs are an individual problem, depending on the occupation, mental alertness, and age. Some patients are content with a visual acuity of 20/200, and others are unhappy with less than 20/40. Satis-

factory reading is not possible with less than 20/50, and at this stage most patients are willing to undergo surgery if they can have reasonable assurance of better vision. It is well to keep in mind that 20/40 vision is more satisfactory than aphacic vision corrected to 20/20; patients with aphacia have difficulty in judging distances, their visual field is restricted by the thickness of aphacic lenses, and they have difficulty going down steps.

Before consenting to surgery, patients want to know how well they will see after the operation and what they will be able to do. In a measure this will depend on the success of the operation, and, if the ophthalmologist could predict the surgical result, he could predict visual acuity. The factors which affect the surgical result are (1) the condition of the eye, (2) the condition of the patient, and (3) the technical execution of the operation.

Condition of Eye

Diseases of the eye, if not acute, are no contraindication to cataract extraction. Two years ago we operated on both eyes of a patient with retinitis pigmentosa. She made an uneventful recovery, and her visual acuity is 20/100 in the right eye and 20/40 in the left. She can read and sew, and having been totally blind for several years previously, she thinks that she has wonderful vision in spite of her narrow fields. We did a cataract extraction on an eye with retinitis proliferans; the fellow eye has a central scotoma from a macular choroiditis. The vision in the eye operated upon is 20/40, and the patient has been restored to usefulness. Diseases of the fundus and glaucoma, provided that tension has been controlled, are no contraindication. If the patient with an opaque lens has good light projection and color perception, his vision is bound to be better with the opaque lens extracted. Trophic lesions of the cornea are apt to be aggravated by surgery, and we had 2 cases of cyclitic cataract which developed postoperative keratitis.

The condition of the lens is of some prognostic significance. In immature cataract opacities in the posterior portion of the lens with vacuolization of the lens capsule are a good prognostic indication; the disintegration of the lens fibers has released the intimate connection between the posterior cortex and the capsule, so that even if the capsule ruptures, the lens masses are easily evacuated. The axial opacities of the posterior lens capsule, which impair vision badly, have a good prognosis for an intracapsular extraction. In nuclear sclerosis without involvement of the posterior pole, the connection between the lens and the hyaloid membrane is intimate, and if the lens comes out in the capsule, the vitreous is apt to follow; if the capsule breaks, the posterior cortex is adherent to it and is not easily removed. The prognosis for an uncomplicated intracapsular extraction in this type of opacity should be guarded. The easiest lens to extract is the immature lens in which the slit-lamp examination shows vesiculation of the posterior pole and in which vision taken with the pupil adapted to office illumination is from 20/80 to 20/60, but with the pupil contracted by outdoor light is so reduced that the patient feels unsafe in crossing a city street.

Condition of Patient

The patient's general condition, with the exception of diabetes, appears to have little effect on the postoperative course. Benedict[4] stated that the diabetic patient presents the greatest hazard. In spite of careful preoperative preparation and careful sugar control postoperatively, we have had cases with delayed healing and all its disastrous consequences. In our 246 private cases we had 11 cataracts in 9 diabetic patients. One of the patients had large lenses and secondary inflammatory glaucoma in both eyes. We performed bilateral vitreous fistulization followed immediately by lens extractions. The patient recovered with good central visual acuity in both eyes, but with constricted fields. After operation 8 eyes of diabetic patients had a visual acuity between 20/40 and 20/20; and 1 had 20/400 because of diabetic retinopathy. In 2 eyes of the same patient, the anterior chambers remained empty in spite of repeated attempts to restore them by air injections. The left eye developed a secondary glaucoma with scar tissue filling the anterior chamber, and extensive vascularization of the iris. In the right eye the anterior chamber was finally restored by a vitreous fistula which reduced the pressure in the vitreous. Nevertheless this eye too shows a proliferation of fibrous tissue, and vision is but 20/100. There were 12 cataract extractions in diabetic patients at the Jefferson Davis Hospital. Only 1 had vision better than 20/40; 1 had a postoperative iridocyclitis; 1 had a vitreous hemorrhage; and 3 had postoperative glaucoma. We do not encourage surgery in a diabetic patient because we consider the prognosis uncertain and the complications unpredictable.

Other general diseases seem to have been of no significance in our private series or in the Jefferson Davis Hospital cases. Two years ago we operated on a woman who had a colostomy performed ten years previously. She still had useful vision, and we discouraged surgery. She insisted that she wanted to see well and the family did not want to point out to her, as we did to them, that her life expectancy was probably short and did not justify the operation. She made an uneventful recovery, has satisfactory vision, and is still alive.

The records of the Jefferson Davis Hospital show a number of cataract extractions following hospital admission for other diseases. Among them were patients with severe hypertension, cardiac conditions, bronchitis, prostatic diseases, pulmonary tuberculosis, gastric ulcer, and pernicious anemia. None of these diseases seemed to have had any significant effect on the postoperative course of the cataract extraction.

General hypertension is frequent in patients of cataract age. We always reduce a high blood pressure prior to the operation by sedatives and diet for a few weeks. In the clinic series where this was not done there were no severe complications definitely attributable to the hypertension. A venesection is done on every patient with systolic blood pressure over 150, and adrenalin is used sparingly.

Dexterity of Surgeon

Perhaps more important than the patient's general condition and the condition of the eye is the surgical dexterity with which the operation is performed. The voluminous literature on cataract extraction reveals a confusing divergence of opinion among surgeons of great skill and vast experience on practically every step of the operation. The successful results reported with the use of widely different techniques force the conclusion that the results are determined not by the type of procedure used but by the meticulousness with which it is performed.

SURGICAL TECHNIQUE

There are a few basic principles in cataract surgery which we believe simplify the operation regardless of the technique employed. Control of the emotional state of the patient is of utmost importance. We like our patient somnolent and obtain the most desirable relaxation from a combination of a barbiturate which is hypnotic with an opiate which is analgesic. We use demerol for the opiate. Because some patients become nauseated following its administration, we give a trial dose the night before surgery; if the patient does not become nauseated, we use it again one hour before the operation. If the patient appears nervous when he reaches the operating room, we inject 2 grains of amytal intravenously, and by the time akinesia and the anesthesia have taken effect, the patient is usually asleep.

Safeguards

The procedures known as safeguards, which include akinesia, retrobulbar injection, injection anesthesia, canthotomy, a pressure free speculum, and suture of the wound, are for us indispensable and are now widely used. The highly skilled surgeon can operate without any of them and they are unnecessary in many cases, but their systematic use will usually prevent unpredictable complications and make possible their control when they do arise.

Complete immobilization of the eyeball, which is not used as widely as it deserves, simplifies the operation immeasurably. For years[6] we have fixed the eyeball above by tying the superior rectus suture to a Guist speculum and below by introducing into the episclera a hook devised for this purpose. Knapp[10] in a recent article stated that tying the rectus suture to a speculum raises the intraocular pressure, but he did not give the supporting data for this statement. We took a number of tensions on the table before and after tying the suture to the speculum. Invariably the intraocular pressure is reduced after the suture is fixed.

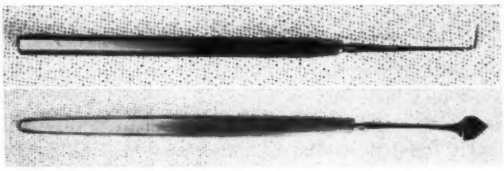

FIG. 1. Fixation hook (above) and modified keratome (below) used in cataract surgery.

The fixation hook (fig. 1 above) is right-angled, wedge shaped, sharp at both ends, and 1 mm. thick at the base, and its short end is 5 mm. long. Introduced into the episclera at the limbus at the 6 o'clock position, it fixes the eyeball by lifting it. Pressure on the eyeball, so often exerted by a beginner with fixation forceps and leading to premature emptying of the anterior chamber and to falling of the iris over the Graefe knife, is thus eliminated. If fixation with forceps gets insecure, the tendency is to tighten it by pressure on the eyeball, with the augmented hazard of undesirable complications. To secure fixation with the hook the ophthalmologist lifts more and diminishes intraocular pressure further. The hook introduced into the episclera may be laid aside over the nose when not in use or may be held by the assistant.

For the last three years[8] we have been using a combination of two sutures: a sclero-conjunctival suture through the wound at 12 o'clock and a running conjunctival suture through a broad conjunctival flap. In our private series we had 2 cases of subconjunctival iris prolapse which did not require repair. There were 11 cases of iris and vitreous prolapse in the 229 clinic cases; in these cases our suture was used once, the Stallard suture 3 times, the McLean suture once, and corneoscleral suture 6 times.

There are three important steps in the operation on which there is as yet no unanimity among surgeons of wide experience: (1) the method and position of the keratotomy, (2) the type of iridectomy, if any, and (3) intracapsular or extracapsular extraction.

Keratotomy

The initial length of the keratotomy may vary from 6 mm. made with a keratome to half the size of the corneal circumference made with the Graefe knife. Its size is governed in some measure by the size and hardness of the lens. The normal lens is 9 mm. in diameter, with an average thickness of 4 mm. Most cataracts retain the normal size of the lens, but the intumescent lens can become twice as thick and the hypermature lens is thinner than normal. An intracapsular extraction requires a larger incision than capsulotomy extraction. Some surgeons use a corneal incision; the majority prefer the incision at the limbus with a conjunctival flap. Spaeth[13] considered a conjunctival flap as an essential of a good cataract incision.

The perfect keratotomy with the Graefe knife is a joy to behold but it is a delicate and skillful procedure. After watching residents acquire the technique, we concluded that the keratotomy made with the keratome and enlarged with scissors is a much safer procedure, with which the beginner will obtain more uniform results. The Castroviejo keratome makes a cleaner incision than the Graefe keratome, but in patients with deep set eyes and narrow palpebral fissures, we found its length inconvenient. We therefore modified the keratome to a more suitable size; it is 9 mm. long, and 6 mm. wide; its straight edge is 4 mm. long and the angled edge 5 mm. (fig. 1 below).

Iridectomy

Most surgeons use some type of iridectomy. A round movable pupil is perhaps the earmark of the finished cataract surgeon; but the ophthalmologist never has an occasion to regret having made a complete iridectomy. Technically a round pupil extraction is more difficult and requires better assistance. We use an Elschnig iridotomy[7] and make a total iridectomy in cases in which we expect complications, or in which complications develop unexpectedly. Stallard[14] regarded diabetes as a contraindication to any type of iridectomy. We have always done a complete iridectomy in diabetes because we consider the operation in diabetics fraught with complications. Recently we operated in 1 case with a round pupil technique without any unusual effect on the postoperative course.

Extraction

A large preponderance of surgeons now do the intracapsular extraction. In recent textbooks on ocular surgery, Spaeth,[13] Meller,[11] Blaskovics,[5] Stallard,[14] and Arruga[2] described the two types of techniques, with a clear preference for the intracapsular extraction expressed by Blaskovics and Arruga. The others contended that the extracapsular extraction should be mastered first, and the intracapsular technique acquired later. Contrary to this opinion, we believe that the intracapsular extraction is the operation of choice, being subject to less complications, and should be mastered at the outset by every ophthalmic surgeon. The intracapsular technique requires a greater respect for and gentler handling of the ocular tissues, and these attributes should be acquired as the ophthalmologist begins to operate. The residents at the Jefferson Davis Hospital are trained with that viewpoint. The breaking of the capsule is regarded as a complication, the management of which results in an extracapsular extraction, followed if possible by immediate extraction of the capsule.

Whether the surgeon tumbles the lens or extracts it head on, the type of capsule forceps or suction apparatus he uses is of no consequence as long as the lens is extracted with the capsule and without vitreous loss. The visual data of our cases do not indicate that moderate vitreous loss is as grave a complication as is commonly believed. The fear of vitreous loss probably stems from the time when on the appearance of vitreous the eye was rapidly closed, without any attempt to do a toilet of the wound, so that it usually resulted in incarceration of iris, vitreous, and tags of lens capsule. Now, when we do a meticulous toilet of the wound, instill air into the anterior chamber to hold the vitreous back, and suture the wound tightly, most of the eyes recover with useful vision.

Among our cases were 12 eyes with moderate loss of vitreous and 1 cyclitic eye with loss of much fluid vitreous; this eye recovered with a vision of 20/20. Of the 12 eyes with slight to moderate loss of vitreous 9 eyes had vision between 20/40 and 20/20; 1 eye had 20/60; and 2 had 20/100.

The best prophylactic against vitreous loss is a soft eye. There are, however, as pointed out by Wiener,[15] eyes in which there is an anomalous union between the anterior hyaloid and the lens capsule; in these cases the hyaloid is torn by the traction on the lens and vitreous follows it. Moving the lens laterally and rotating it before exerting any traction may be helpful in separating the posterior capsule from the anterior hyaloid. We use the Knapp-Torok-Elschnig technique for extracting the lens in the capsule. Knapp's contribution to this technique is the tumbling of the lens, Torok's the traction, and Elschnig's the lateral movements to rupture the zonule.

The most difficult lens to deliver in the capsule is the intumescent and hypermature lens, in which the capsule is so stretched that it cannot be grasped or, if grasped, it promptly ruptures. Puncturing the lens at the equator with a fine needle and evacuating some of the soft lens cortex[9] is of decided help in releasing the tension of the capsule, which can then

be grasped by the forceps and the lens extracted. Since using this maneuver we have abandoned suction extraction, which we formerly used in intumescent and hypermature lenses. To use suction extraction successfully and safely the surgeon should have suction cups of different sizes, and be able to vary the degree of vacuum, as described by Ribeiro[12] of the Barraquer Moner clinic.

Completion of Operation

At the completion of the operation we fill the anterior chamber with air. One of us (R. K. D.) has been injecting air into the anterior chamber after vitreous loss for eighteen years.[6] In such cases it is definitely helpful in keeping the vitreous and capsule tags from getting incarcerated in the wound. During the last four years we began using it routinely. It is important to keep the patient quiet until the pupil contracts; by brusque movements the air can be forced behind the iris, which would push the iris against the cornea instead of backwards. In an uneventful extraction we introduce the air after the operation is completed. In case of vitreous loss air is introduced into the eye immediately after the suture is tied, to free the wound of vitreous as quickly as possible. If during the toilet of the wound the air escapes, it is reintroduced as the last step in the operation.

We previously drew the air into the syringe through an alcohol flame. Barraquer Moner[3] sterilizes the air in syringes in an autoclave. Two years ago one of us (R. K. D.) saw Dr. Cordes in San Francisco draw room air into the syringe. He said that he had been using room air for some time without untoward complications. We have been less careful in sterilizing the air since, with no untoward effect. The routine postoperative use of penicillin may add a degree of safety to what would appear to be a relaxation of asepsis.

We instill a 2 per cent solution of eserine as soon as the lens is delivered, and in round pupil extractions we introduce in addition a 1 per cent eserine ointment into the conjunctival sac after the operation is completed. Frequently by the time we have finished suturing the wound, which takes some time with our suture, the pupil has contracted.

We leave the eye which has not been operated on unbandaged, and change dressings on the other eye daily. Some surgeons do not dress the eye for several days, and there may be no real advantage in an early dressing except for the moral stimulus to the patient and the surgeon derived from the knowledge that all is well. We have, however, been told repeatedly by patients that the eye feels more comfortable after the dressings have been changed, and we believe that a comfortable eye is not so apt to get a postoperative hyphemia as an eye the discomfort of which tends to cause a spasm of the orbicularis. Most postoperative hyphemias are self-inflicted through a spasm of the orbicularis, and patients should be warned not to contract their lids. Fortunately the large majority of postoperative hyphemias are rapidly absorbed in a few days. We get the patients out of bed on the second day. On the fifth day we leave the eye which has been operated on open under a metal shield.

ANALYSIS OF RESULTS

The visual acuity in our series of 246 cases was between 20/40 and 20/20 in all but 17 eyes. Of these 2 eyes were lost from accidental trauma soon after the patients were discharged from the hospital. One eye was lost from an expulsive hemorrhage a few hours after operation. This eye had essential atrophy of the iris, with secondary glaucoma and cataract. Using the same procedure, we had done a posterior sclerotomy and lens extraction on the other eye of this patient with a normal postoperative course and good visual acuity two months previously. One eye had amblyopia exanopsia from strabismus. One eye had a retinal detachment four weeks after the operation, and two operations for the detachment were unsuccessful. Two eyes had 20/100 because of central retinal changes. One eye was lost from epithelization of the anterior chamber. Four eyes had vision of 20/70 because of a preexisting glaucoma. One had a postoperative iridocyclitis with a resulting acuity of 20/100. One eye had central myopic fundus changes. One eye had poor visual acuity because of diabetic retinosis, and 2 because of postoperative complications in a diabetic patient.

An analysis of these 17 cases shows really poor results in 3 patients: the 2 eyes that were lost from a blow on the eye after the patient went home and the eye lost from epithelization of the anterior chamber. Fortunately the eye lost from expulsive hemorrhage and the one from retinal detachment were the second eyes of patients who had one extraction with good visual acuity, so that on the whole they were better off, even if they had good vision in only one eye. The patients with the fundus lesions could see better than they did before the operation, although they could not read. The patients with glaucoma had better central visual acuity after the operation, as did the eye following a postoperative iridocyclitis. The poorest result in the diabetic patient still gave him better acuity than he had before the operation.

SUMMARY

Cataracts should be classified clinically as being in operable and inoperable stages.

The indication for the extraction of uncomplicated

senile cataract is a reduction in visual acuity below the patient's visual needs.

The operability of the cataract is determined by the condition of the lens, the condition of the eye, the condition of the patient, and the surgeon's confidence in his technique.

With good anesthesia, a soft eyeball, and perfect immobilization of the eyeball, intracapsular extraction of immature cataract is a safe procedure.

The intracapsular extraction is the procedure of choice, and should be mastered by the ophthalmic surgeon.

Rupture of the capsule is a complication of the operation, and if consistent with safety, the capsule should be extracted after the nucleus is delivered.

A fixation hook and a modified keratome to facilitate the operation are described.

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ABSTRACT OF DISCUSSION

DR. F. H. NEWTON, Dallas: The fact that the time for removal of a cataract depends on the visual demands of the patient rather than on the stage of the cataract should be made common knowledge to the general profession. Some patients with 20/40 vision for distance have poor reading vision and appreciate an aphacic eye for reading purposes. Not infrequently a patient with 20/40 vision in one eye and a satisfactory aphacic eye on the opposite side will use the eye which has been operated on for reading and the other eye for general purposes. I agree with the authors about removal of monocular cataract. Having a spare eye ready for use is appreciated by the patient. An eye successfully operated on has fewer chances of complications such as glaucoma than an eye with mature cataract. An immature cataract is more easily removed because there is more give to the pressure of the capsule forceps, which makes grasping the capsule easier.

Complications associated with cataract extraction are relatively few when the blood pressure is elevated. A pressure above 150 systolic is probably usual so that I doubt if venesection is indicated in many cases. As the essayists state, the general condition of the patient is less important since early mobilization of the patient has come into general use. A patient with old healed fundus lesions seems less likely to develop postoperative iritis or posterior uveitis, a certain immunity having apparently been established. I have more trouble with plethoric patients between 50 and 60 years old.

The authors make the statement that "perhaps more important than the patient's general condition and the condition of the eye is the surgical dexterity with which the operation is performed." I would certainly leave out the word "perhaps." Minimum trauma means maximal results. I am sure that a high percentage of the postoperative complications that occur in my patients is related to some lack of smoothness in the surgical procedure. Postoperative penicillin injections are an excellent routine.

Tying the superior rectus suture to the speculum is a questionable procedure. Immediately before delivery of the lens I have always removed the speculum and depend on suture lid retractors held by an assistant.

About six years ago Dr. L. C. Heare of Port Arthur showed me the sclero-conjunctival suture which I still use. Three scleral tangential sutures are inserted at 10, 12, and 2 o'clock positions respectively after a narrow conjunctival flap is prepared. Immediately before delivery of the lens the two ends of the central suture are mattressed up through the thick portion of the conjunctiva at its junction with the cornea. The other two are completed in the same way after the central suture is tied following delivery of the lens. Any suture that is forcibly inserted after the eyeball is opened invites trouble such as traumatic uveitis and detached retina. For ten years I have been using 4-0 plain catgut with no regrets.

I am sorry the essayists do not come out more positively for the round pupil. The difficulty of delivery through the round pupil is over emphasized. Its advantages are apparent. The status of the round pupil in cataract surgery is similar to that of intracapsular extraction fifteen years ago. Now few question the advisability of intracapsular extraction and my belief is that in a few years the round pupil extraction will be as firmly established.

The fine needle puncture of the intumescent lens sounds interesting. I wish Dr. Daily in closing would say more about it.

DR. RAY K. DAILY, closing: I regret that more time was not available for bringing out the differences of opinion which I am sure exist relative to some of the steps in the operation. I share with Dr. Newton his enthusiasm for a round pupil. The esthetic effect of a round pupil is profound, and we do a great many round pupil extractions. However, I have the impression that the round pupil is a greater source of satisfaction to the surgeon than to the patient. Inasmuch as the operation with a round pupil requires keener surgical judgment, greater dexterity, and more careful postoperative management, it seems to me that the younger surgeon by doing an iridectomy can obtain just as good visual results without the additional risks.

The puncture of the lens at the equator is a helpful procedure in cases in which the lens capsule cannot be grasped because it is tightly stretched by the swollen intumescent lens; an intumescent lens may be twice the normal size of the lens anteroposteriorly. If the surgeon succeeds in making a fold in such a capsule it promptly breaks. In such cases, as soon as we find that the capsule cannot be grasped easily,

we make a small puncture, with a puncture hook, in the capsule, through the iridotomy opening or through the coloboma as close to the equator of the lens as possible. After the hook is withdrawn a small droplet of soft lens substance exudes from the opening in the capsule, and it loses its tense appearance; it can then be grasped and the lens extracted in the capsule. Sometimes, particularly if the incision is too small, the lens capsule may rupture just as it comes through the wound, but then it can practically always be picked up as it lies in the wound and be extracted. If any soft lens matter escapes into the anterior chamber, it is insignificant and is rapidly absorbed. We have done a number of punctures in all types of lenses and found that the opening in the capsule creates no complication in any case. In a lens which is difficult to grasp with forceps because the capsule is tight as in the intumescent lens or thick as in the hypermature lens, the puncture releases the tension within the lens and makes possible the grasping of the capsule by the forceps. For us this procedure eliminated the indication for suction extraction.

PREVENTION AND TREATMENT OF COMPLICATIONS IN CATARACT SURGERY

EVERETT L. GOAR, M.D., Houston, Texas

THE ophthalmologist who includes cataract surgery as part of his work has trouble for a bed fellow, and he should prepare himself mentally to accept this fact before embarking upon his career. Nevertheless, most ophthalmologists like to operate upon cataracts and few will pass up the opportunity to do so. It seems well, therefore, to discuss the situation and to find what the dangers are, how to avoid them as far as possible, and what to do when some unexpected complication arises. One of the chief hazards is that as a rule the ophthalmologist is dealing with elderly patients who have varying degrees of vascular sclerosis. They are often victims of other diseases such as diabetes, vascular hypertension, arthritis, gout, prostatism and dermatoses. Not a few have cataracts engrafted upon primary glaucoma.

During the past quarter of a century many changes in technique have been devised that have made cataract surgery safer at the time of operation. The day is gone in which the nervous excited patient keeps looking up while the surgeon pleads with him to look down or raps sharply on his forehead to enforce his orders, or in which the surgeon must hurry through and close the eye before the patient decides to squeeze the cataract out. Preoperative sedation, superior rectus suture, better anesthesia, akinesia—these simple measures have added immeasurably to the safety of cataract surgery.

The complications most feared at operation are choroidal hemorrhage and loss of vitreous. Those most likely to occur later are wound infection, anterior chamber hemorrhage, delayed restoration or loss of anterior chamber, iris prolapse, anterior uveitis, keratitis, glaucoma, and retinal separation. Another unwelcome outcome is a central scotoma due to a tiny chorio-retinal disturbance that may at first not be visible by the ophthalmoscope, to a small retinal hemorrhage, or to retrobulbar neuritis.

Read before the Section on Eye, Ear, Nose, and Throat, State Medical Association of Texas, Annual Session, Dallas, May 7, 1947.

CHOROIDAL HEMORRHAGE

Choroidal or expulsive hemorrhage may be dismissed briefly because fortunately it is rare. It is particularly likely to occur in arteriosclerotic patients who have ocular hypertension. This hypertension is often due to swelling of the lens in intumescent cataracts, and in case it is not well controlled by miotics preliminary iridectomy should be done. If expulsive hemorrhage occurs during operation, a posterior sclerotomy should be done at once, the sutures tied, and the patient placed in a sitting position. After this calamity a useful eye is never obtained no matter what the treatment. I have had only 2 of these disasters.

LOSS OF VITREOUS

The loss of vitreous requires more discussion because it is the commonest untoward event that happens during operation. Some surgeons take this casually, but I am not one of them. I have heard operators say they would rather get the lens out in capsule with a little vitreous loss than to do the capsulotomy operation. I do not belong to this school of thought. The commonest causes of loss of vitreous are (1) a tense muscle cone, (2) pressure from the orbicularis muscle or from the speculum, (3) poor selection of the type of operation, or (4) heavy handed surgery.

Spasm of the extraocular muscles is likely to occur in heavy-set persons with strong musculature, and it evidences itself by the fact that the eye does not soften, even after a retrobulbar injection of procaine and adrenalin. The best method of assuring a soft eye is to give a retrobulbar injection of 4 per cent procaine with 3 minims of suprarenin per cubic centimeter ten minutes prior to operation. I have found basal analgesia obtained by a capsule (1½

grains) of nembutal one hour before operation, followed fifteen minutes later by ⅓ grain of pantopon hypodermically usually produces good relaxation. If the cornea does not collapse with the loss of aqueous humor following incision but bulges a trifle, the iris prolapses and a horizontal fold may appear in the cornea. This is the moment for the surgeon who had his heart set upon doing an intracapsular operation to change his mind.

It is presumed that the surgeon has made sure there is no pressure from the lids or speculum before making the incision and if necessary canthotomy has been done. Lid sutures are convenient at this time, for the speculum can be removed and the lids lifted forward off the globe, removing any possible pressure from above. It is best to do an iridectomy because of the tendency to iris prolapse. A sharp cystitome or Schwegger toothed forceps should be inserted and the capsule opened with the least possible backward pressure. The lens will almost deliver itself, or may be expressed by gentle pressure below, assisting the delivery by a Fisher needle. The operator can decide now whether it is safe to irrigate the anterior chamber before tightening the sutures. A Hague ultraviolet light is of considerable value in rendering cortical lens fibers visible.

Some ophthalmologists are wedded to the intracapsular operation and it must be admitted that the ideal operation is intracapsular extraction through a round pupil. It should also be admitted that this operation requires more manual dexterity than the extracapsular and that there are certain persons in whom it is not safe. The surgeon should have in mind what he intends to do, but be willing and ready to change his tactics if the occasion demands it. If vitreous loss occurs I give penicillin intramuscularly for at least forty-eight hours following operation and do not inspect the eye for seventy-two hours unless there is complaint of pain.

WOUND INFECTION

Wound infection or endophthalmitis from implanted infection is the most serious complication with the possible exception of expulsive hemorrhage. Of course the surgeon would never operate upon an eye the conjunctival sac of which does not look clean or in which the lacrimal duct is not patent without carefully considering the consequences. For years I have taken cultures on blood agar plates, rejecting any patient who showed an abundant growth of any hemolytic organisms. One of the most difficult decisions to make is when, if ever, to operate upon a person with what seems to be allergic conjunctivitis. Repeated search for organisms should be made in such cases.

Ophthalmologists at the Wilmer Institute have used sulfadiazine before and after operation. I gave this up because some patients were nauseated by it, but perhaps I did not give it a fair trial. I have used oxycyanide of mercury, argyrol, and recently penicillin drops preoperatively. I found several persons allergic to penicillin. It is probable that the lysozyme in the tears is, in the absence of purulent infection, the most satisfactory antibacterial agent. Most infections are probably carried into the eye by instruments that are not properly sterilized or by instruments touching the unsterile lashes or lid margins.

At the first sign of infection large doses of penicillin and the sulfa drugs should be started at once and penicillin drops or ointment used locally. While it has been shown experimentally on rabbits by Leopold[1] that high blood concentrations of penicillin do not appear in the vitreous, I believe that I have saved 2 eyes from enucleation by the combined use of penicillin and the sulfa drugs. Leopold found that repeated subconjunctival injections stopped endophthalmitis in rabbits and that intravitreal injections of concentrations above 500 units per cubic centimeter caused a prompt subsidence of the infection. This is probably the best method in postoperative endophthalmitis, although it has not been thoroughly worked out on human eyes. Foreign protein seems to be of little benefit in these virulent infections.

Even with the new pharmaceuticals the outlook for a useful eye is bad. The patient is left with a thick membrane occluding the pupil, and it is usually vascularized from vessels entering at the site of incision or from the iris. Several months after such an eye has become quiet, a satisfactory pupil may be made by a Wheeler discission, or if that fails, by making a small corneal incision, at the same motion penetrating the membrane with an Agnew keratome, then cutting out a piece with Beren's or de Weckler's scissors and withdrawing it. It is better to go in below than to push the keratome through the fibrous tissue above. Often the vitreous has been involved in the infection, bands form, and separation of the retina is the termination.

ANTERIOR CHAMBER HEMORRHAGES

Hemorrhage into the anterior chamber usually occurs the fourth or fifth night after operation and is an annoying and may be a serious complication. Practically all these hemorrhages come from new vessels that are forming across the wound. The patient squeezes the eye, springs the wound a little, and the blood slips down into the anterior chamber. Small hyphemias usually absorb quickly and do no harm, but this is not always the case. If the wound is sutured rather tightly and the anterior chamber is full of blood, the intraocular tension rises and the

cornea acquires a blood stain that remains for months. In case capsulotomy operation has been done, lens fibers, capsule, fibrin, and blood cells get together and form a membrane that will require discission. In intracapsular extraction the blood may mix with the anterior vitreous from which it absorbs slowly. The most prolific cause of postoperative hyphemia is the conjunctival flap, and the shorter the flap, the more hemorrhages. Fewer postoperative hemorrhages occur if the incision is made within clear cornea.

To avoid these anterior chamber hemorrhages I for some time abandoned the conjunctival flap, making a keratome incision just within the clear cornea and using one corneoscleral suture. This reduced the number of hemorrhages but had two disadvantages. If the pupil were widely dilated it was difficult to pick up the iris beneath the corneal shelf, and I had more flat, anterior chambers. To prevent this I did a peritomy above and pulled a conjunctival flap down over the incision after closing the wound with the corneoscleral suture. This worked well except that the flap often became attached to the areas where the needle went through the cornea, making the suture difficult to remove. This can be avoided by incising the conjunctiva some 2 mm. above the limbus. Currently I have returned to the corneoscleral suture with a limbal suture on each side.

DELAYED RESTORATION OR LOSS OF ANTERIOR CHAMBER

If the anterior chamber is evacuated by paracentesis, it is quickly reformed as the puncture seals over and continuous formation of aqueous humor rapidly restores it to normal depth. Usually at the first dressing, forty-eight hours after cataract operation, the chamber is of normal depth, but occasionally there is none; then I watch the eye apprehensively at each dressing, hoping it will be formed by the next day. There are two possible reasons why the chamber does not reform: (1) a leaking wound and (2) paralysis of the aqueous forming apparatus. The first of these causes is practical; the last theoretical. As no one knows exactly how aqueous is formed, this theory will remain in the realm of speculation until the mechanism is established. It is probable that a separation of the choroid due to hypotony takes place as soon as the lens is delivered in most cases.

O'Brien discovered this separation by looking with an ophthalmoscope immediately after operation, and I have often seen it myself. This usually has no significance as the choroid reattaches promptly once the normal tension is restored. In some patients in whom the chamber remains flat, an extensive separation involving the nasal, lower, and temporal quadrants can be seen. In such a situation there is probably always a leaky wound, though it may be difficult to detect, especially if the wound is covered by conjunctiva. Examination of the incision with a slit lamp may reveal that the lips of the incision are not properly apposed. There is no doubt that wounds in some patients do not heal as fast or as thoroughly as they should even though the edges are well apposed. This is the result of some inherent tissue defect.

As these chambers usually fill in time, there would be no cause for concern were it not that three unpleasant complications are prone to occur in such an eye, two of them leading to secondary glaucoma. The first is the formation of peripheral synechia at the iris angle when cornea and iris lie in contact too long. The second is epithelialization of the anterior chamber which begins as a down growth of epithelium from a wound which heals slowly. The third is the persistence of striate keratitis which will not disappear so long as iris is in contact with cornea. It has seemed to me that it is better to use a miotic in these patients to attempt to keep the angle open.

If a leaking wound is found, the use of silver nitrate along the edge may stimulate healing. The eye should be kept unbandaged as soon as possible as the opening and closing of the eye also helps the healing process. If after six or seven days the wound is still leaking and a complete chamber has not formed, sealing the leak with a diathermy point will usually close it. If this fails it is necessary to cover it with a conjunctival flap and inflate the anterior chamber with air. I had more flat chambers from the corneoscleral suture and corneal incision than from any of the other methods of wound closure.

It has been said that it is impossible to diagnose epithelialization of the anterior chamber except by histologic sections. This is not strictly true. Often with the biomicroscope it is possible to detect an adventitious membrane in the anterior chamber coming in from some part of the incision and extending progressively either across the back of the cornea or along the iris where it can be seen best crossing the pupillary area. Such an eye should at once be given roentgen-ray treatments, enough to destroy the delicate epithelium without damaging the rest of the eye. This is the roentgenologist's problem. Early and efficient treatment may prevent loss of the eye from secondary glaucoma. It is in these eyes that have had delayed healing of the wound that this complication must be closely watched for. That this need not be an essential factor is illustrated by the following case:

CASE 1.—A combined intracapsular extraction was done on the left eye of R. H. G., age 68, July 15, 1942. The operation was uneventful. On the fifth postoperative day he had a small hyphemia and the anterior chamber was shallower than before, but not flat. The next day the anterior chamber was of normal depth, and the blood absorbed rapidly. August 4 the patient reported that when he awakened there was a "tree" before his vision. There

was a small hemorrhage in the anterior vitreous. This soon cleared and he was fitted with a lens with which his vision was 20/20+ and Jaeger no. 1 for near.

His vision remained good until April, 1944, when it dropped slightly and a thin membrane was found across all but the lower temporal quadrant of the pupil, lying on the face of the vitreous. He has been away from observation for several months, but I could detect no sign of low grade uveitis. I thought he had a thickening of the face of the vitreous and as he complained of a constant blur, I made a crucial incision through the membrane July 30, 1944. He had a rather severe reaction following the discission, for which I gave him several doses of foreign protein. However, the membrane reformed and in October he showed evidence of hypertension. For the first time I suspected epithelialization of the anterior chamber. He had a number of roentgen-ray treatments and a cyclodialysis done without relief. Meanwhile the cataract in the right eye had been removed uneventfully. The left eye was enucleated May 21, 1946. Microscopic sections showed epithelialization of the anterior chamber causing intractable secondary glaucoma.

PROLAPSE OF IRIS

It has been demonstrated experimentally that wounds sutured at several places are more difficult to rupture than those less well sutured. This discovery has been used by many surgeons as a reason for placing from five to seven sutures around the incision. The fact remains, however, that iris prolapse is comparatively rare if iridectomy or iridotomy has been done, and a profusion of sutures complicates and delays an operation. If a large iris prolapse occurs within a few days after operation, it should be repaired at once. Small prolapses or pillar incarcerations that bulge a little should be allowed to remain until later. Some weeks after operation fulguration with a small needle, destroying the iris tissue and freshening the edges of the wound, will insure healing and a firm scar.

ANTERIOR UVEITIS

Practically every eye that has had a cataract removed, if examined with the biomicroscope a week or ten days after operation, will show some evidence of iritis as denoted by cells in the aqueous humor or a few fibrin flecks or leukocytes on Descemet's membrane, or by an aqueous flare. This is probably traumatic in origin and is of no consequence. In not a few instances, however, this persists and becomes aggravated. Small intravenous doses of foreign protein should be started at once in such a case, after an intracutaneous skin test. Elderly, even feeble persons bear this treatment well if it is begun with small doses and the reaction is watched carefully. I no longer return patients to the hospital for this therapy. It is of course essential to keep the pupil dilated and suprarenin bitartrate is useful as an adjuvant to atropine in severe cases. Iritis occurs oftenest after extracapsular extraction in which some lens debris has been left behind. This is an argument in favor of the use of ultraviolet light for irrigating the anterior chamber. Phaco-anaphylactic reactions while unusual may be severe and difficult to control, and there is no certain method of differentiating it from infection.

KERATITIS

A certain amount of striate keratitis follows injury to Descemet's membrane at operation. The striate appearance is due to folds in Descemet's membrane and edema of the cornea. This usually disappears within a short time, but occasionally it persists and rarely causes a deep clouding and produces the picture of keratitis profunda with permanent damage to the corneal structure. Striae will not disappear if the vitreous or iris is in contact with the cornea. Bullous keratitis may be a late sequella of this condition, or it may be the result of secondary glaucoma following cataract operation. To secure healing in this painful disorder it is necessary to dissect off the superficial corneal stroma, at the same time doing a cyclodialysis to lower the tension in hypertensive eyes. It may be possible to save an eyeball from enucleation by this method, although useful vision is not obtained.

Rarely, following cataract extraction a peculiar type of sclerosing keratitis takes place in which the whole cornea turns white as marble. This has few if any signs of active inflammation. It seems to be a fibrosis caused by degeneration and replacement of the corneal stroma by connective tissue such as is found in the sclera. It is probably due to the circumstance that the limbal circulation in some corneas is insufficient to nourish the cornea when half of it is cut off temporarily. No treatment seems to be of any avail and if it happens to one eye it is likely to follow operation in the other.

GLAUCOMA

While there is no reason that persons with cataracts should not have primary glaucoma, and all patients with glaucoma develop cataracts in time, it is glaucoma secondary to cataract operations with which I am concerned here. I have mentioned the commonest causes, that is, severe anterior chamber hemorrhage, peripheral synechia following a collapsed anterior chamber, and lens detritus or cellular debris blocking the drainage angle. It has been stated in the textbooks that incarceration of a pillar in the wound commonly causes glaucoma. Indeed this statement has been used as an argument against iris inclusion operations. My observations have not confirmed the statement. Seldom an incarcerated pillar causes any trouble except that the wound may become cystic at that point. The following case illustrates the difficulty in arriving at a correct understanding of the cause of secondary glaucoma under certain conditions.

CASE 2.—J. P. B., age 63, had immature cataracts. The right eye was operated on November 1, 1944. The capsule ruptured accidentally, so combined extraction was done. He got along well until the ninth postoperative day, when he complained of severe pain the night before. He had lost the anterior chamber, probably as a result of squeezing his eye vigorously. The chamber reformed a week later. He was allergic to practically all drugs. Striate keratitis disappeared slowly. His best vision was 20/40. A thin membrane appeared across the coloboma anterior to the vitreous extending diagonally, attached to the cornea anteriorly and temporally, and to the iris nasally. I thought this was certainly an epithelialization and had him given a number of roentgen-ray treatments. Hypertension ensued, the cornea became edematous. I cut the membrane with a Ziegler needle-knife and did a cyclodialysis in the upper nasal quadrant. This gave no results, so I did another cyclodialysis on the temporal side, July 22, 1946, at the same time removing the cataract from the other eye. He lost the anterior chamber in this eye on the eighth postoperative day, but it reformed the following day and he had no further trouble with the left eye. The right eye continued to pain him and the tension remained high, so it was enucleated October 20. The pathologist reported detachment of the corneal endothelium, reduplication of Descemet's membrane, and anterior peripheral synechia with fibrosis of the iris and hyalinization of the ciliary processes. I was much disappointed that no epithelialization of the anterior chamber was found to account for this intractable glaucoma.

Paul Chandler read a paper before the Section on Ophthalmology of the American Medical Association in which he stated that secondary glaucoma is caused by the pupil becoming blocked by vitreous. He cited cases that developed shallow anterior chambers and hypertension from this and these were relieved by an incision through the iris. I cannot recall having seen a case in which the pupil was blocked by vitreous, but it is something to keep in mind.

Glaucoma capsulare may occur after the lens is extracted and may be diagnosed by the capsular remains on the iris or in the chamber angle where they may be seen by the gonioscope. I had this occur in both eyes of a woman patient who had no evidence of hypertension before operation but had particles of capsule on the iris.

The treatment of secondary glaucoma depends upon the cause, but it may be difficult to determine the etiology. In cases where the angle is blocked by synechia or debris, cyclodialysis is the safest and most satisfactory operation. With a long, angled spatula it is possible to separate the root of the iris for almost 180 degrees through one incision. This often permanently reduces the tension.

Glaucoma in the young following cataract operation may be avoided by selecting the proper type of operation. In needling soft cataracts if Ziegler's method of cutting through anterior and posterior capsule is used, allowing room for the lens to expand backward as well as forward, glaucoma need not be feared. In young adults linear extraction, using ultraviolet light to fluoresce the lens material so it can all be removed, is a satisfactory procedure.

SEPARATION OF RETINA

Separation of the retina, an unpleasant sequel to cataract extraction, has plagued me several times. While it happens oftenest in persons who have had large vitreous loss, it also occurs in those who have had easy and uncomplicated extractions. Strangely enough, in my series detachment has followed intracapsular oftener than capsulotomy operations. Only once has it followed discission of a secondary membrane in my cases. Separation of the retina having followed intracapsular extraction oftenest is probably a coincidence. In my opinion these separations are due to cystic degeneration of the retina and might have happened with the lens in. No doubt the loss of a solid substance the size of the crystalline lens and its replacement by fluid aqueous and semi-fluid vitreous humor may activate detachment in a predisposed eye. Pressure of the hook as it encircles the limbus to rupture the zonule may detach the vitreous and become a factor favoring separation of the retina. Whatever the mechanism that produces it, separation of the retina is a serious sequel to cataract extraction because for some unknown reason it is seldom successfully reattached. The ophthalmologist must consider carefully before putting an elderly person through the rigors of after treatment necessary for a detachment operation. If the person is old and in poor health and the other eye is sound, the chances of success are too meager to warrant advising operation. In patients who are in good health or who have only the one eye it should be attempted hopefully but with mental reservations.

This paper does not cover all the misadventures that may happen to the eye operated on or to the patient physically following operation. I have had 1 patient develop pneumonia and 1 or 2 have had attacks of coronary occlusion following operation. Twice I have had patients posted for operation who died suddenly of heart attacks just before entering the hospital. The ophthalmologist should consider the patient's physical and mental condition carefully before deciding upon operation on a feeble old person, for sometimes there is not enough stamina left to bring about recovery and the patient slowly fades away without ever being able to enjoy the restored vision. If a useful eye is obtained in an aged and infirm person, the other eye should not be operated upon even if the lens goes to hypermaturity. However, in persons who are in comparatively good condition and have immature cataracts in each eye that have reduced the vision considerably, the second eye should be operated on within a few months as it is wise to get the two eyes to working together again as soon as possible.

I am convinced that most ophthalmologists are

much more careful with their patients after operation than is necessary, and that this accounts for some of the complications. Putting a patient to bed for several days, bandaging both eyes, and keeping him quiet on his back is more than some people can stand. As ophthalmologists get away from these old methods there are fewer complications.

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ABSTRACT OF DISCUSSION

DR. V. R. HURST, Longview: Dr. Goar's paper reminds us of many things about which the ophthalmic surgeon would prefer not to have to think, but he gives valuable suggestions for avoiding them.

Since the choice of cataract operation for most ophthalmologists has changed from the extracapsular to the intracapsular method of extraction, there are not so many eyes to watch week after week hoping that the cortical remnants and the capsule will absorb, but there are other complications that did not appear with the capsulotomy method. A rather unusual complication occurred when I attempted an intracapsular extraction. The posterior capsule ruptured and the whole membrane was removed attached to the forceps just as a shroud and the nucleus slipped into the vitreous chamber.

While I do the operation with a round pupil in every case which I consider suitable, it seems that there is slightly more tendency for iris prolapse.

DR. W. E. VANDEVERE, El Paso: A paper by Dr. Goar always is a pleasure and a profit to any one hearing or reading it. An ophthalmologist can hardly disagree with anything he has had to say, and I merely wish to emphasize a few points and add a few which the length of his paper prevented.

To me, cataract surgery is the most fascinating and satisfying of any type of surgery, both from the standpoint of the operator and the patient. However, as the essayist has said, we must be prepared for some disappointments. For the most part we are dealing with elderly patients who, many times, are victims of other diseases, and it is remarkable that close to 95 per cent can be expected to obtain useful vision regardless of complications or operators. On the other hand we sometimes think we have an ideal case with a perfect operation to be disappointed by finding a macular degeneration preventing central vision. I know of no test which gives this information before operation.

I like to have the blood pressure as low as 170 systolic, but have often operated successfully with the pressure well above 200. Likewise I have had no unusual difficulty with diabetic patients when they have been placed under control and stabilized.

I think one of the most sensible advances in ocular surgery is allowing more freedom of movement and getting the patient out of bed at an early date. There are few surgeons who persist in such archaic punishment as sandbags to immobilize the head, binocular bandages, and rest flat in bed for a week or more. Certainly a patient should not be kept in bed more than two or three days at most and if there is difficulty in urination, he should be allowed to get out of bed the first day rather than to use a catheter.

Postoperative glaucoma is a difficult condition. I have tried most of the operations including the favorite of cyclodialysis with little success. Recently these cases have been treated with a new miotic, di-isopropyl fluorophosphate (or D. F. P.) and excellent results have been reported by McDonald* and others.

A good light is important in all eye surgery. I have recommended before and again I wish to urge the use of the electric sightscope or magni-focuser. This can be had with a current transformer from V. Mueller of Chicago. This instrument provides an excellent light with slight magnification, which is exceedingly helpful both to the young operator and the presbyope.

DR. GOAR, closing: It is often extremely difficult to determine the cause of secondary glaucoma following cataract extraction. The first sign is often bedewing of the corneal epithelium as viewed by the biomicroscope. At least that has often been the first clue I have noted, and the tonometer then establishes the diagnosis. Determining the best treatment is often puzzling. If the tension rises as a result of uveitis, shall we put the iris at rest with cycloplegics or attempt to open up the angle with miotics? I think it wise to try a mydriatic that can be counteracted, such as homatropine or scopolamine. Suprarenin bitartrate may be valuable in this situation. Often if medical treatment fails, cyclodialysis is necessary and it should not be deferred until irreversible changes take place in the cornea. Frequently a mixture consisting of eserine, pilocarpine, and dionin will reduce the tension promptly, and when the debris in the angle is absorbed it does not rise again.

*McDonald, P. R.: Treatment of Glaucoma with Di-Isopropyl Fluorophosphate (D.F.P.), Am. J. Ophth. *29*:1071-1081 (Sept.) 1946.

MENTAL DISEASE HOSPITAL STATISTICS

The first of a series of current reports on mental hygiene statistics has been issued by the Division of Mental Hygiene of the U. S. Public Health Service. The first report is concerned with the normal capacity, percentage of overcrowding, full-time administrative staffs, and expenditures for maintenance of state hospitals for mental disease in 1946.

Statistics for Texas reveal an average of 7.7 patients per employee and an average daily resident-patient population of 11,069. The per capita expenditure for maintenance of hospitals in 1946, based on average daily resident-patient population, was $295.96 in Texas and $436.72 throughout the nation.

ACADEMY OF PROCTOLOGY

The International Academy of Proctology, which is organized for the support and encouragement of proctology in practice, study, research, and legislation, was established July 6, 1948. Founders of the academy want it to be "international in scope, extensive in membership, and active in the development of high ideals for the specialty of proctology." In addition, they plan to set up standards and a board for qualification of proctologists.

Members, honorary fellows, and associate fellows are provided for in the new organization.

Further information and application blanks may be obtained from Dr. Alfred J. Cantor, 43-55 Kissena Boulevard, Flushing, N. Y.

TREATMENT OF GLAUCOMA

LESTER H. QUINN, M.D., Dallas, Texas

THE term glaucoma includes a group of diseases having in common intraocular pressure higher than the eye can withstand without loss of function. Primary glaucoma occurs without an evident structural defect in the eye. Secondary glaucoma occurs when there is obstruction of the trabecular spaces by cells, pigment, tumor, dilated vessels and capsular epithelium. This is the wide angle type. When the angle is narrow or shallow, it may be mechanically closed, and secondary glaucoma follows. Glaucoma may cause anterior peripheral synechias which may block the angle or it may result from anterior peripheral synechias which form when there is loss of the anterior chamber following cataract extraction. Lack of communication between anterior and posterior chambers may result in glaucoma. Occlusion of central retinal vein and diabetic rubeosis result in vascular stasis and block the angle and trabecular spaces. Congenital anomalies around the angle and canal of Schlemm may be followed by glaucoma. Sugar[13] has given a complete classification of glaucoma which is useful in understanding the underlying pathologic condition.

Undoubtedly there is a tendency toward glaucoma in persons who have a predominance of the thoracolumbar sympathetic over the parasympathetic nervous system. This mechanism is probably active in so-called primary glaucoma. These persons are over sensitive to caffeine, cocaine, and adrenalin. Their pupils dilate easily. Their blood pressure rises abnormally when the hand and wrist is placed in ice water. The liability test of Bloomfield and Lambert[2] and other provocative tests for glaucoma are based on the over activity of the thoraco-lumbar sympathetic nervous system. The medical treatment of glaucoma presupposes an under activity of the parasympathetic nervous system.

Prophylactic treatment requires early diagnosis of the preglaucoma state and the use of weak miotics in the morning and at bedtime. Patients should be taught to control their emotions and avoid situations causing intense emotional reactions. Operations for cataract extraction should be designed to give early restoration of the anterior chamber and atropine should be used sparingly.

MEDICAL TREATMENT

Medical treatment of glaucoma consists mainly in the use by instillation of drugs which have a miotic effect or decrease the flow of blood to the eye.

Read before the Section on Eye, Ear, Nose, and Throat, State Medical Association of Texas, Annual Session, Houston, April 27, 1948.

Miotic drugs can be divided into five classes:

1. Those which cause central or peripheral stimulation of the parasympathetic nervous system and cause a choline-like substance, probably acetylcholine, to be liberated at the myoneural junction in the iris and ciliary body. An example is morphine.

2. Those with choline-like effect, including acetylcholine, mecholyl, carcholine, furmethide, pilocarpine, histamine, pituitrin, and prostigmine.[10] The first three are destroyed by cholinesterase, an enzyme produced by practically all tissues and constantly present in the blood and tissue fluids. Histamine and pituitrin effect is not prevented by atropine.

3. Those which neutralize or destroy cholinesterase, including eserine, prostigmine, disopropyl fluorophosphate (D.F.P.), and carcholine.[15]

4. Those which sensitize muscle cells to choline-like substances, such as potassium, barium, and strontium.

5. Those which interfere with the thoraco-lumbar sympathetic nerves, blocking the reaction of cells to sympathin. An example is ergotamine.

Miotics are most effective in narrow angle glaucoma, freeing the angle and permitting increased outflow of aqueous humor, but there must be some other action also because miotics are often effective after iridectomy, in wide angle glaucoma, and in cases where miosis does not occur. Evidently this action is partly on the choroidal vessels, reducing the volume of blood in them.

Miotics may precipitate an attack of acute glaucoma. This probably occurs because of engorgement of the vessels of the iris and ciliary body, increased permeability of the capillaries, and increased protein content of the aqueous. Von Sallman and Dillon[16] have shown that epinephrine, neosynephrin, and pituitrin by topical application before or soon after instillation of D.F.P. counteract the rise in pressure and increased permeability of the capillaries. Sugar[14] has recommended the use of a combination of miotic and vasoconstrictor drugs. This is important on the first application of a strong miotic.

Choline-like Effect

Pilocarpine is the most useful miotic and is used in .5 to 4 per cent solution. Many ophthalmologists are convinced that glaucoma not controlled by 2 per cent pilocarpine, some say 1 per cent, should be treated by a surgical procedure. Other factors such as age and general physical condition may make it necessary to use more effective miotics and avoid surgery.

Acetylcholine is destroyed too quickly by cholinesterase to be clinically practical. One of the choline derivatives, mecholyl, is used in 10 to 20 per cent solution by instillation and in a dose of 25 mg. by retrobulbar injection in cases of acute glaucoma. Prostigmine is often used as a synergist. Another choline derivative, carcholine, is used in .75 per cent solution in zephiran followed by massage. Its greatest use is in chronic simple glaucoma in cases not responding to pilocarpine. Because of troublesome and prolonged blurring and sometimes pain, other miotics should be used first. Carcholine has a double action. It has an acetylcholine-like effect and also inhibits the action of cholinesterase to some extent.[15]

Furmethide (furfuryl trimethyl ammonium iodide) is used in 5 to 10 per cent solution. It has no ester linkage that can be attacked by cholinesterase and therefore is effective without synergistic action of eserine, prostigmine, or D.F.P. Marr[7] found that if furmethide failed to control the pressure, D.F.P. in .1 per cent solution had little chance of success.

Inactivation of Cholinesterase

The drugs which inactivate or destroy cholinesterase, thereby permitting the natural acetylcholine to stimulate the sphincter of the iris and ciliary muscle are eserine, prostigmine, D.F.P., and carcholine.[15] Eserine is used in .25 to 2 per cent solution, frequently as a synergist to pilocarpine. It may cause allergic conjunctivitis and posterior synechia if used a long time. Prostigmine may be substituted for eserine if sensitivity develops; it seems to interfere less with the patient's daily routine.[6] It is used in 3 to 5 per cent solution.

D.F.P. is a new drug resulting from chemical warfare research. It inactivates and probably irreversibly destroys cholinesterase. It causes marked miosis, contraction of ciliary muscle, false myopia, and dilatation of the limbal vessels when instilled into the eye in .05 to .2 per cent solution. It is a long acting drug, some of its effect lasting from ten to twenty-one days in normal eyes. It can overcome cycloplegia induced by atropine and homatropine but has been unsuccessful in some cases of glaucoma induced by atropine and homatropine. Some complications of D.F.P. are occasional rise in intraocular pressure, severe eye or brow ache, blurring of vision, allergic conjunctivitis, and possibly disinsertion of the retina.[5]

I have used D.F.P. .1 per cent in cases not controlled by pilocarpine 1 per cent every four hours and eserine ointment .25 per cent at bedtime. In 6 cases of secondary glaucoma following cataract extraction, it controlled the pressure in 3 but had to be discontinued in 2 of these because it caused allergic conjunctivitis.

In 2 cases of glaucoma secondary to occlusion of central retinal vein, D.F.P. had no effect on 1 but controlled the other for one month before losing its effect. A retrobulbar injection of alcohol controlled the pain in each case.

In 12 cases of chronic simple glaucoma, 7 were controlled but 1 had to discontinue D.F.P. because of allergic conjunctivitis. Five cases were not controlled and 2 of these had a rise in pressure following use of D.F.P. No vasoconstrictor drugs were used.

Of 5 cases of recurrent congestive glaucoma, narrow angle type, 3 were controlled with D.F.P. and 2 were not.

One case of juvenile glaucoma was controlled for three months and then D.F.P. became ineffective and a bilateral iris inclusion operation was done.

One case of subluxated cataractous lens with glaucoma was controlled and 1 case of posterior dislocation of lens with glaucoma was not controlled and a retrobulbar injection of alcohol was given as the eye was blind.

It is too early accurately to evaluate D.F.P. It has acted phenomenally in some of my cases not controlled by pilocarpine and eserine. In some cases it was superior to furmethide while in others the reverse was true. It is best tolerated in aphacic eyes. Most eyes requiring D.F.P. to control the pressure should be operated on while the pressure is low.

When there is a lack or diminution of production of choline-like substance, pilocarpine, mecholyl, carcholine, or furmethide is indicated.[11] Eserine, prostigmine, and D.F.P. are indicated where there is normal production of choline-like substance but over activity of cholinesterase. As stated before, carcholine and prostigmine act in both of these ways.

Other Drugs

Morelli and Salvi[7] have shown that the formation of cholinesterase is increased in the blood serum of patients with essential hypertension. The intravenous injection of synthetic vitamin K (menadione, 2-methyl 1, 4 naphthoquinone) diminishes both the hypertension and the formation of cholinesterase in the blood serum.

Rados[9] found that cholinesterase in the blood of glaucoma patients was within the high normal range.

Glaucoma secondary to active uveitis is best treated by drugs of the epinephrine series which are used to break up adhesions, dilate the pupil, and lessen engorgement of the blood vessels, thereby lowering the intraocular pressure. There are occasional increases in pressure after use of these drugs. Sometimes paracentesis or a Reese incision is needed temporarily to control pressure until medical treatment is effective. Homatropine and atropine can be tried later.

Acute congestive glaucoma calls for prompt and energetic treatment. Corneal edema can be cleared

with glycerine but gonioscopic studies are not satisfactory because of congestion of the iris. Morphine constricts the pupil and relieves pain and anxiety. Intravenous hypertonic solutions aid in lowering pressure. Eserine 1 per cent, pilocarpine 2 per cent, and dionin 3 per cent are given every ten minutes for an hour. Retrobulbar injection of procaine and adrenalin is good in treatment as well as for operative anesthesia. Other miotics may be used if there is no improvement within three or four hours.

SURGICAL TREATMENT

If the pressure is not controlled within twenty-four hours, surgery is indicated. If the pressure is controlled, surgery should be done in the noncongestive stage as experience has shown there is great danger of recurrent congestive attacks, each taking its full toll of vision.

Operative procedures are designed to do one of four things:

1. Free the angle and unblock the canal of Schlemm. Basal iridectomy and goniotomy are such procedures.

2. Produce new channels of intraocular drainage, as with cyclodialysis.

3. Produce new channels of extraocular drainage, as with iris inclusion, corneo-scleral trephine, and LaGrange procedures.

4. Decrease production of aqueous humor. Cyclodiathermy is an example.

When it is decided that medical treatment is insufficient to control the glaucoma or control it with only a small margin of safety or may be neglected by the patient, operation should be done and as early as possible. In deciding whether the glaucoma is being controlled, it is necessary to know the twenty-four hour tension curve and to follow the changes in the visual fields. Central vision alone is not sufficient evidence on which to continue medical treatment.

Certain preliminary procedures are used in most operations for glaucoma. It is undesirable to operate when the pressure is high because of the danger of intraocular hemorrhage and forward dislocation of the lens when the pressure is suddenly lowered as the anterior chamber is opened. Every effort is made to lower the pressure by use of morphine, intravenous hypertonic solutions, and retrobulbar injection of procaine and epinephrine from twenty to thirty minutes before operation. Posterior sclerotomy may be used in cases of extremely high pressure. Nembutal is given for its sedative effect as well as to prevent procaine reactions. Miotics are used before and after operation in the opposite eye to ward off an acute congestive attack due to anxiety caused by the operation.

Basal Iridectomy

Basal iridectomy is indicated in acute narrow angle glaucoma during the first attack if it has not lasted more than twenty-four hours and the pressure is not controlled by medical treatment. The procedure is indicated in the noncongestive stage if medical treatment succeeds in lowering the pressure to normal limits within twenty-four hours. Keratome incision places the opening too far forward to do a basal iridectomy. A Graefe knife can be used if the chamber is not too shallow. The safest incision, however, is the ab externo incision after a conjunctival flap has been turned down from above.

Intraocular Drainage

Cyclodialysis has its greatest field of usefulness in glaucoma following a cataract operation. It is occasionally used in wide angle glaucoma with only moderately elevated pressure and as a secondary procedure in wide angle cases partially relieved by a previous filtering operation. Dense anterior peripheral synechias, large blood vessels in the angle, and the long ciliary arteries in the horizontal area should be avoided. Care should be taken to avoid injury to corneal epithelium and Descemet's membrane. The head is kept elevated postoperatively if the site of operation is above. Miotics are used in sufficient strength to keep the pupil well constricted.

Extraocular Drainage

Iris inclusion is indicated in cases of acute congestive glaucoma which have lasted over twenty-four hours or which are recurrent attacks. In these cases iridectomy is insufficient because anterior peripheral synechias have had time to form. Iris inclusion is also indicated in chronic simple glaucoma of the narrow angle type, in secondary glaucoma with inactive uveitis, and in buphthalmos, although goniotomy is used more and more in the last condition. Iris inclusion is contraindicated where one or more operative procedures have failed. It is not satisfactory in long standing cases with high pressure and when atrophic changes in iris have taken place. It is not indicated in aphacia.

I have been following the technique of Goar and Potts.[4] The ab externo incision is the least likely to be followed by cataract or by severe intraocular hemorrhage. Sclerectomy with a Holth punch may be done in cases with high pressure.

Corneoscleral trephine is done in preference to iris inclusion operation when there is atrophy of iris. It is also useful in wide angle chromic noncongestive glaucoma. The thick conjunctival flap as advocated by Benedict[1] is important in all external filtering operations.

The LaGrange operation is considered by O'Brien[8] to be the best of the external filtering operations. It

is especially good when it is known a cataract extraction will be necessary later. It can be combined with an iris inclusion operation.

In glaucoma complicated by cataract, if the glaucoma is the primary condition, an anterior external fistulizing operation should be done. The LaGrange operation is especially satisfactory in this situation. If it is believed the glaucoma has been caused by the developing cataract and is noncongestive and controlled by miotics, a cataract extraction with a wide basal iridectomy may be done. This may control the glaucoma.

Reduction of Aqueous

Cyclodiathermy has as its purpose reducing the amount of aqueous humor formed. It has been used in absolute glaucoma, in glaucoma following occlusion of central retinal vein and diabetic rubeosis, and in cases in which other operations have failed. It has been used as an initial operation in chronic noncongestive glaucoma in the Negro.[12] The postoperative reaction is not always predictable, and permanent control of the glaucoma is uncertain. Retrobulbar injection of alcohol relieves pain in eyes blinded by glaucoma and is a much simpler procedure. However, blind, painful eyes should be enucleated unless they have been followed a long time and it is known they do not have a neoplasm.

Fox[3] has shown that trephining is still the most popular operation, that iris inclusion has given the best results, and that iridectomy is often used in chronic glaucoma in which it is less successful than in acute glaucoma and less successful than external fistulizing operations.

CONCLUSIONS

Glaucoma patients should be studied thoroughly to determine the type of glaucoma so that proper medical and surgical treatment can be used. The gonioscope and corneal microscope are valuable in these studies.

Miotics have different actions. Some are more effective in some cases while others are more effective in other cases. They may be used in different combinations.

Except in patients for whom surgery is contraindicated because of physical condition, operation should be done if the glaucoma is not controlled by 2 per cent pilocarpine.

When it is once determined that medical treatment is not sufficiently effective or may be neglected by the patient, operation should be done early.

Before operation the intraocular pressure should be lowered by every means available to avoid dislocation of the lens and intraocular hemorrhage.

The postoperative care is as important as the operation. Massage is extremely important after external fistulizing operations.

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ABSTRACT OF DISCUSSION

DR. EDWARD W. GRIFFEY, Houston: Despite the many new drugs which have been found useful in the management of glaucoma pilocarpine is still preeminent; it has fewer disagreeable side actions and is still the safest. Whenever eserine or some of the more powerful drugs are needed to control the tension, the condition calls for surgery.

Secondary glaucoma poses difficult and peculiar problems following uveitis, trauma, or surgery. Such eyes should be watched months or years after the disease has been brought under control. Acute congestive glaucoma is another disease caused by some heretofore unknown factor—a neurovascular crisis—and demands heroic treatment as much as any surgical emergency. As pointed out ophthalmologists should employ every modality at their command to lower the tension before surgery, and retrobulbar novocaine and adrenalin should always be employed. In my hands, and in general, the iris inclusion of Holth gives the best results. The iridencleisis may also be performed in the acute congestive type of glaucoma after lowering the tension and after the inflammation has been controlled. I agree with the essayist regarding the early use of massage, and I massage at the time of the first dressing. With care this can be done with little pain or discomfort to the patient.

When dealing with so complex a disease as glaucoma, the ophthalmologist should strive to fit the surgery to the type of condition and not to his own convenience.

ORTHOPTICS WITHOUT INSTRUMENTS

SAM N. KEY, JR., M.D., Austin, Texas

THERE are some who believe that a great obstacle to the utilization of available information about retinal correspondence and orthoptic training is the special equipment involved (that is, major amblyoscope), the time necessary for pursuing the known methods, the lack of sufficiently trained assistants, or the financial considerations. If the practicing ophthalmologist is able to provide some of the measures alluded to, there still lurks ahead on the orthoptic road a disturbing block—the "instrument cure." The purpose of this presentation is to outline two simple treatment procedures which partially circumvent the difficulties suggested. Neither of these procedures is original; they are mentioned, though often not fully described, in various places,[5, 6] and a fuller discussion is perhaps worth while.

Orthoptics, according to one definition, consists of measures "other than surgical, which are designed to develop or restore the normal coordinated binocular functions."[3] Further, such function is by no means necessarily secured by the usual "eye exercises" which include the use of the major amblyoscopes, stereoscopes, tachistoscopes, rotoscopes, and so forth. There is no reason to suggest any lack of value in these devices in proper hands and circumstances, but there is the unavoidable difficulty of their ready accessibility to the patient, and there is some doubt if they provide conditions sufficiently simulating the customary use of the eyes or if they can create some factor developmentally absent.[1]

The several steps in the two procedures which do not utilize the usual instruments are simple, but it must be understood that as here presented they have been confined to patients with normal retinal correspondence whose objective deviation is from 10 to 20 degrees, patients who are "straight" with or without glasses but who actually lack binocular vision, and to certain patients with heterophoria such as convergence insufficiency. The visual acuity of these patients has not been poorer than 6/12 for one eye or poorer than this for each eye.

METHOD OF TRAINING

To begin with, the ophthalmologist must seek to make the patient more aware that there may be doubling of the object of regard when the eyes are positioned improperly or with difficulty. The value of such demonstration to him, and especially of sustaining it, is naturally evident. Such true diplopia is ordinarily an unpalatable state of affairs, to be reckoned with either by suppression or suitable adjustments in the ocular apparatus. The former is the state frequently found in the cross-eyed child. Although the suppression has been attacked by any or all of the usual instrument and occlusion methods, there still may remain the possibility of its existence under ordinary room conditions. For example, it is not unusual to see the patient who is unaware of the doubling of so gross an object as a pencil or finger when observation of his eyes clearly reveals inadequate convergence, in addition to the usual comitant squint, but who rarely complains of diplopia.

Red Glass Exercises

In such a patient, the red glass over one eye is often an important way to make diplopia evident to him. With a child, it is probably easier to narrow his attention by working about 3 feet from a wall or screen, upon which there is fastened an object easily seen. His replies are checked by occluding one or another eye and even a fleeting awareness of diplopia under these conditions is worth while, to be reinforced by questioning. A useful way, initially, is the use of a naked flashlight bulb and a really dense red filter over one eye. The patient is asked, "How many lights do you see?" If he replies that there are two, he is asked about the position, color, stability, and so forth of each light. His answers are checked, as has been mentioned, and knowing the objective measurement of his deviation by other means, the examiner soon is easily able to recognize whether the proper separation of the images is indicated. This check may be facilitated by using something like the Hess screen upon which the light is fastened.

The patient may deny seeing more than one light. A second image may be made more evident by momentarily and repeatedly covering the eye which he is principally using for fixation. The examiner asks if, during this brief covering, another image is observed. A number of patients suggested as being benefited by these techniques will correctly indicate that they are seeing two lights. If one of these is seen only momentarily or "it comes and goes," the patient should be enjoined to "concentrate on seeing the one that does not want to stay there." I have seen a child of 5 or 6 years able to make the proper responses to this sort of thing within five minutes, though scarcely at an earlier age.

When using a wall screen or chart upon which tangent arc degrees separation of the two images may be made, and when consistently using given distances

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from the screen, an examiner soon gains a fairly accurate impression as to the exactness of the relation between such a subjective measurement and a previously made objective one. Because of the possible danger in relying upon the answers of younger patients, it is worth while to spend a few minutes rechecking the validity of their answers, at different distances from the light, and so forth. For the same reason, it may also be well to avoid the smaller-angled deviations, as error is more easily made for obvious reasons. A variation of this is to use a wand of about 3 feet in length, at one end of which a small electric light is fastened; it may be held and moved about by the patient.

Once the examiner is assured that the patient can be aware of a true diplopia in the manner given, it is possible to progress to the use of a less-dense red glass and a less strong or evident target. Briefly, these alterations consist of selecting a red glass (actually a shield composed of varying thicknesses of red cellophane) of less density. Instead of a naked bulb, a small picture or figure from cardboard may be affixed to the screen and viewed while the room is well illuminated, and almost always viewed by one eye through a less effective filter than the one originally used. It is frequently necessary to "bring out" the second image by intermittently and briefly covering the eye without the red glass, and encouraging the patient to "see and hold them both." Whenever he can consistently and continuously do so—for from thirty to sixty seconds by the clock—he is permitted to follow the same procedure at home, whether it be using only the naked lamp and densest filter or a more advanced combination, at the distances prescribed.

One naturally wonders whether it is wise or safe to permit the home use of a method such as this. When it is done in a consistently correct manner in the office, performed at home, and then again properly repeated in the office at another visit, it may be assumed that the right technique is followed.

Upon eliciting true diplopia, particularly if it can be done by the utilization of only the lesser amounts of filter, there is created a fairly valuable tool for future use, for it is then that the examiner is more apt to find superposition at the patient's objective angle by the use of base-out prisms or the amblyoscopes. It is probably reasonable to assume that the patient is better able to use the eyes together when they are placed in more anatomically favorable position (as by operation) or when targets are suitably placed (as by amblyoscope).

There is the group of strabismus patients who seem to represent a satisfactory cosmetic appearance as the result of glasses or surgery, but are found to suppress with one eye or to overconverge for near objects. Still others, and in possibly greater numbers, are the persons lacking comfortable binocular vision because of heterophorias, notably convergence insufficiency For these types, there is available the useful training of bar-reading or bar-framing, to be attempted after successful use of the red glass. The following routine is after Miss Lancaster,[4] and, as she has insisted, is always carried out in the sequence indicated.

Bar-Framing Exercises

The patient first fixes upon a wall-target at eye level, placed from 10 to 20 feet from him; if a child, from 3 to 6 feet away. A pharmacist's spatula is held by the patient directly in front of, and about 3 to 4 inches from, the nose. He is then asked about the position of the bar or bars upon the wall, blurred though they are. If the right eye is covered, a bar is seen to the left of the target, and if the left eye is covered, to the right. When the patient is using both eyes for fixation, a bar to each side of the target should be noted, and if only one be seen, the patient is not using each eye for fixation. In the latter instance, he should be assisted in obtaining binocular fixation by alternately covering the fixing eye so as to help to bring out the missing bar. If he cannot be thus made to see the two bars, the ophthalmologist may substitute the naked ophthalmoscope lamp for the spatula. Should there be failure to see two lights when used in the hand as a "bar," or failure to note two fixation points by the methods already mentioned, the patient is not ready for the succeeding steps. When it is possible for two bars to be seen promptly and they can be maintained for one full minute by the clock, more complex tasks may be attempted.

The patient is instructed to continue fixing upon a large wall target and to move the bar to and fro until it evenly or exactly frames the object. Successive objects or targets about the room should be so framed. Next, the patient should walk toward and recede from one of these objects, while moving the bar so as to keep the object exactly framed. Considerable variation in targets or objects is available even in what may be the relatively bare examining room. The next step is to use the same routine upon a large magazine photograph placed 3 feet from the patient and held finally in the hand. While framing this, of course, accommodation is called into play.

Using a page upon which there is large print or small figures or designs for children, the patient should observe that the page is divided into five sections: left margin, through the left bar, between the bars, through the right bar, and the right margin. Questions should be asked about the words that appear in each of these sections. Failure to answer these, jerky reading, or omissions when reading across the

page indicates that the eyes are not being used together. When satisfactory responses are given, the patient is ready to read consecutive words across the page in a normal manner. He should be asked to "read between the bars," then "through the right bar," "through the left bar," and so forth, dropping down a line or figure at each request. If he cannot read across the page in the usual fashion with the bar in place, he should have a week's daily practice at doing nothing but identifying each of the five sections of properly framed page. Daily sessions, of from twenty to thirty minutes' duration, of correct bar reading at home have been of great assistance in providing comfortable binocular vision.

EVALUATION OF TRAINING

The natural questions to this discussion are chiefly as to whom the procedures are applicable and what is the length of time required in using them. I am able at present only to suggest an answer because of my limited experience. I believe, however, that such measures as have been described will make evident true (not false or anomalous) diplopia under room conditions or normal surroundings and will shorten the period of twenty-five to fifty sessions on the major amblyoscope which is often necessary for the older squinting child at some stage or another. Four to six sessions on this instrument may serve greatly to reduce suppression, but the training is even more striking and useful to him away from the instruments. Once this result has been attained, the patient is more likely to make adjustments as are possible to him, or he is more apt to respond more favorably in the event that corrective surgery is needed. I believe that occlusion periods, which are frequently of themselves difficult during school time, are reduced.

The child has to be 5 or 6 years of age. In 18 patients, whose ages ranged from 5 to 9 years, it was my impression that a period of preparation which previously had required about three months was reduced to six weeks. By pursuing the bar-framing routine, 8 adults and 4 children between the ages of 8 and 10 years seemed to derive definite benefit as to comfort in casual use of the eyes and were subsequently better able to demonstrate true binocular vision. This occurred four weeks after commencing the daily sessions suggested. One of the most gratifying results was the fact that such bar-framing in every instance apparently benefited the patients who were able to demonstrate binocular vision to the extent of fusion with amplitude on the major amblyoscope, but who were monocular when tested by other means. Naturally, however, with many variables and in so small a group, no attempts at numerical evaluation should be made.

It should also be appreciated that, in addition to the limitation as to the type of patients described, reference to other phases, such as vertical anomalies, training toward relaxation of accommodation, and divergence exercises, and to the worth-while contribution of Eyles,[2] have been purposely omitted. Also, no explanation as to the reason for the possible efficacy of the two routines described is included.

SUMMARY

Several possible handicaps to the use of larger orthoptic devices are cited, and it is suggested that they may perhaps be partly eliminated by the use of simpler means.

The available simpler methods might include the attempt to produce true diplopia by using a colored glass or filter over one eye, and the use of bar-framing or bar-reading exercises. Techniques based upon these are described, although as herein presented they are limited to only certain types of heterotropia and heterophoria, and no significant statistical conclusions may be made from this description.

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NEW DRUG FOR ASTHMA RELIEF

Aludrine, a synthetic drug modified from adrenalin, generally affords quick and pleasant relief for asthma sufferers, write Drs. L. N. Gay and J. W. Long in the February 12 issue of *The Journal of the American Medical Association*. Of the 48 patients treated by the doctors, 5 who no longer responded to adrenalin during attacks responded promptly to the first course of aludrine mist.

The benefit in the extreme cases lasted only about fifteen minutes, the doctors report, at which time another series of inhalations had to be given. Patients with mild asthma said relief ranged from two to twelve hours.

Radiation Physicists to be Certified

Physicists are now being examined and certified as radiation physicists by the American Board of Radiology, according to *The Journal of the American Medical Association*. Three types of certificates are granted: (1) radiological physics, (2) x-ray and radium physics, and (3) nuclear physics. The second and third are included in the first. Several standards of education and experience must be met by applicants for certification, and examinations are conducted at regular meetings of the board. Further information may be obtained from Dr. B. R. Kirklin, Mayo Clinic, Rochester, Minn.

CHRONIC PARANASAL SINUS DISEASE IN ADULTS

Factors Influencing Treatment

JAMES P. GILL, M.D., San Antonio, Texas

THE concept of treatment of chronic paranasal sinus disease in adults has undergone a distinct change toward conservatism during the past decade. A number of factors have been responsible. One of the chief reasons has been a more general and better understanding among otolaryngologists of the normal physiologic function of the nasal and sinus mucosa and the pathologic alterations which may take place. Another powerful influence has been the introduction of sulfonamides and antibiotics as therapeutic agents. Increased recognition of associated or concomitant changes has also contributed to a more conservative therapy.

Radical nasal surgery has slowly given way to the more conservative measures. However, there remain certain surgical measures, such as the naso-antral window and septal resection, which continue to occupy an important place in the treatment of selected instances of chronic paranasal sinus infection. Radical sinus surgery also has all but disappeared from the scene.

This paper is intended to emphasize the importance of the conservative treatment of chronic sinusitis and the relationship of certain coincident tissue changes which are important in influencing recovery. Among these are the hitherto little understood or little appreciated coincident allergic phenomena.

CAUSE OF SINUSITIS

The normal mucosa lining the nasal cavity and paranasal sinuses is about 1 mm. thick and is covered with ciliated epithelium, the chief function of which is to empty the sinuses of accumulated secretions. The nasal mucosa in its natural physiologic response is intimately linked with the physiologic function of the paranasal sinuses and the normal function of one structure is dependent upon the normal function of the other. This function hinges largely on the movement or beat of the ciliated epithelial covering and the movement of the normal mucous blanket or covering of all the nasal and sinus mucosa. Below the ciliated layer of epithelium in the nasal fossae is a thicker layer or stroma of loosely connected fibrous tissue in which there are many lymphatic spaces. These spaces can be widely distended by fluids such as the lymph. This submucous layer also contains small blood vessels and mucous glands. Any interference with the ciliary function of the mucosa causes a lowered resistance of the tissues and thus the area becomes more susceptible to attack by infection.

The ciliated epithelium may be affected by infection, temperature changes, or drugs. The least deviation from the normal isotonic salt content of solutions used in the nose will influence ciliary action and, if the deviation from normal is sufficiently great, may destroy it. Obviously great care must be used in the selection of drugs to be used in the nose or sinuses to avoid upsetting the normal physiologic balance. When infection is established, ciliary action is decreased and may be entirely abolished. The mucosa changes color once infection becomes apparent. The secretions may become serosanguinous or frankly purulent. Serum, leukocytes and bacteria may be present in the mucosa, causing variable degrees of distention or swelling of the soft parts. In both these phases the ciliary action is impaired, in mild instances temporarily, or in the more severe, perhaps permanently. The exudate may remain sufficiently long to become organized and lead to chronic submucosal thickening or fibrosis.

In answering the question, "When does a sinusitis become chronic?" the following factors must be considered:

1. Impairment or loss of ciliary action, which influences the emptying power of the sinuses.

2. Physical blockage which has been unrelieved or allowed to persist, interfering mechanically with emptying of the sinuses.

3. Constitutional factors influencing the patient's immunity, such as diabetes or nutritional disorders.

4. A prior allergic reaction existing in association with a sinus infection, the allergic condition having been unrecognized or undiagnosed or having been allowed to persist untreated and in its original severity, thus influencing the course of the secondary sinus infection.

Ciliary Action

Ciliary action is the *vis a tergo* responsible for the emptying power of the sinuses; with its abolition secretions cannot be removed from involved sinuses except by gravity or displacement (substitution of air or liquids). The persistence of secretions in a sinus through loss of its emptying power leads to stagnation of secretions with further ciliary damage and eventually the complete disappearance of these processes from the epithelial cells.

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Secretions remaining within the sinuses become foul and bacterial growth flourishes unchecked. The products of purulent decomposition and autolysis have further and more deleterious action on the sinus mucosa. In advanced instances, small abscesses form in the mucoperiosteum and cystic changes may supervene. The extension of the pathologic progress to the bony structures connected with the involved sinus may occur. Obviously the further advanced such changes are, the more difficult will recovery become and the less likely it will occur under any conditions. Remedial measures should, therefore, be applied as early in the course of paranasal sinus infections as possible.

Physical Factors

The presence of a cystic turbinate or a markedly deflected septum which may entirely close one or more of the sinus ostia may prevent recovery by interference with emptying of secretion from the involved sinus even though the cilia are still functioning. This is most likely to occur in connection with involvement of the maxillary antrum and is especially important as a factor influencing the course of paranasal sinus disease since, obviously, complete recovery in such instances cannot occur until the physical block is relieved. A cavity like the maxillary antrum may become sterile, but the sterile contents will remain indefinitely, continuing to exert their influence on the sinus mucoperiosteum and leading to its assuming a chronic pathologic state which may be completely asymptomatic. Absorption undoubtedly occurs in such sinuses, for occasionally sinuses are encountered in which the contained secretions are putty-like in consistency because of concentration of pus through absorption of its fluid elements.

Constitutional Factors

Constitutional conditions such as diabetes, malnutrition, pellagra, and avitaminosis favor the persistence of infection in the sinuses through a lowering of the patient's general immunity or resistance and a coincident increasing of his susceptibility to infections in general.

Allergic Reaction

A persistent chronic sinus involvement may be due to an associated nasal allergy. In allergic patients eosinophils are present in the nasal secretions, but if infection is also present, the polymorphonuclear cells may overshadow and crowd the eosinophils out of the picture, thus misleading the observer even though cytologic studies have been made.

Extensiveness of the process depends on the virulence of the organisms and upon the amount of toxins absorbed, as well as upon the violence of the associated allergic reaction if such be present.

DIAGNOSIS

The chief symptoms of which the patient complains, as a usual rule, are nasal blockage with headache of varying degree and location. Many patients will have a postnasal drip or nasal discharge, a symptom which is often over emphasized. Sphenopalatine neuritis usually has its origin in the posterior group of sinuses and if the involvement in them is chronic, the neuritis will also be persistent.

A thorough, detailed history in each case must be obtained for proper understanding and evaluation of the patient's problem. This will be a valuable aid in placing many cases in their proper category and lead to a more direct line of therapeutic attack. The anterior and posterior nasal cavities must be carefully examined. The nasopharyngoscope often yields valuable information. It is often difficult or impossible in children or young persons to make a completely satisfactory examination. Some cases may require a general physical survey. Properly to evaluate the case, nasal secretion should be obtained and be stained for cytologic study by the Hansel method. This requires little time and gives valuable information. It should be repeated as a daily guide to progress in therapy. Ordinarily the secretion is obtained by having the patient blow his nose on a piece of waxed paper. If secretion is difficult to obtain, Rawlins[3] suggested the use of a long, small caliber cannula with suction. The cannula is passed to the nasopharynx along the floor of the nose. A thin smear is made on the glass slide and after air drying the specimen is stained as follows:

A solution of eosin (yellow, 1:200 in 95 per cent methyl alcohol) is applied to the slide for ten seconds. The slide is flooded with distilled water to dilute the stain and washed with 95 per cent ethyl alcohol to remove excess eosin. The slide is then stained with methylene blue (1:1,000 in 95 per cent methyl alcohol) for ten seconds. Flooding the slide with distilled water and washing with ethyl alcohol is repeated. The slide is air dried and examined with both low and high power objectives.

The rhinologist should examine the slide personally. The interpretation of the slide is based on the type or types of cells present in the secretion. The modern concept is that the polymorphonuclear neutrophils are characteristic of bacterial infections, mononuclear cells of virus infection, and eosinophils of allergy. Of course, a mixed combination of cells may be present.

Roentgen-ray studies of the sinuses may be of value. Transillumination will not differentiate between allergy and infection.

In allergic cases the history and cytologic study of the nasal secretion will usually reveal the correct diagnosis. Intradermal skin testing should be done to

verify the diagnosis. House dust is the most common excitant, probably because of the multitude of allergens which it contains. In cases with a history suggestive of food allergy an elimination diet is important in excluding the foods that cause reaction. Skin testing with food extracts, formerly extensively employed, is thus avoided. Skin testing by pollen extracts is used for determining sensitivity to the pollens currently known to be present in the air. Information which is obtained by daily pollen count or by use of a seasonal pollen chart for the specific locality is also helpful.

TREATMENT

The basic principle of all methods of treatment for chronic sinusitis is the suppression or elimination of the infectious or irritative process with the subsequent restoration of the mucosa to normal or as near normal as possible. When this is accomplished, aeration and drainage of the sinuses will be reestablished on a more nearly normal basis. Anything which detracts from this end and makes the nose less of a normal structure is wrong.

Treatment of Bacterial Type

In treating sinusitis of the bacterial type a preliminary shrinking spray is applied to the nose. A nasal pack saturated with ephedrine butyn oil solution* is placed in each middle meatus and retained for about five minutes. The pack is then removed and the middle turbinate and sphenopalatine area may be anesthetized with 2 per cent pontocaine solution or 4 per cent cocaine solution in adrenalin 1:1,000 or epinine† 1:100 if there is an associated sphenopalatine neuritis.

The patient is placed in a reclining position, chin high, and each side of the nose is irrigated with a solution of normal saline at body temperature according to a modification of the Proetz technique. From 10 to 20 cc. of solution is ordinarily used but more may be required. The solution is placed in one side of the nose and removed by suction applied to the opposite side. The process is repeated for each side of the nose. After thus cleansing, 5 cc. of a freshly prepared solution of penicillin (200,000 units in 120 cc. of normal saline solution) is introduced into each nostril and displaced into the sinuses using the Proetz method. To avoid nasal irritation it has been found that chemically pure sodium chloride must be used in making the physiologic salt solution as well as in preparing the penicillin solution. In my experience tablets made for the purpose as well as ordinary table salt will invariably cause so much irritation that many patients dread the ordeal of a treatment.

Of the medicants used penicillin has produced good results in a high percentage of my patients with chronic sinusitis. This is evidenced by a lessening of discharge and change in color of the mucosa, a change in the bacterial flora, and prompt relief of pain in most instances. The roentgenogram will also show improvement. These changes occur to a greater extent than I have been able to obtain by similar treatment without the antibiotic being used locally. The use of penicillin by intramuscular injection, however, has not produced any appreciable effect on the course of such infections.

A 1 per cent solution of soluble tyrothrycin has not been well tolerated in my patients because of the local irritant effect. This antibiotic is tolerated by the nasal mucosa after anesthetization, but with displacement into sinuses where the anesthetic has not penetrated, pain and headache or marked burning sensation are frequently and suddenly precipitated and may persist over a period of hours and be extremely objectionable to the patient. A much weaker solution is better tolerated, but its bactericidal effect is less pronounced. I have considered that the advantages in the use of soluble tyrothrycin are outweighed by its disadvantages insofar as the paranasal sinuses are concerned. I have had practically no experience with streptomycin. A 2 to 5 per cent solution of sodium sulfathiazole has been used with fair results, but it, too, is irritating to some patients.

The aerosol method of treatment with inhalation of a nebulized solution of penicillin (50,000 units in 3 cc. of buffer solution) each day is highly regarded by some authorities. This form of treatment is efficacious to a degree in chronic infections; however, the best results are obtained in acute cases. This method in my opinion is best used as a supplementary treatment. I have not used it routinely.

Variation of antibiotics is sometimes advisable. Weak acriflavine solution (1:100,000) in normal saline solution is frequently a valuable substitute for the antibiotics and apparently just as efficacious in many patients. It should be retained in the therapeutic armamentarium as a drug which will be of value in patients sensitive to the antibiotics or unresponsive to them.

Vaccines, autogenous or stock depending on personal preference, are often included in the general treatment of the case. Small doses frequently repeated have proved best in my experience. Diathermy may assist greatly in alleviating the symptom of pain. Dietary deficiencies must be corrected and mixed vitamins are advisable. Constitutional diseases, if present, should be corrected or alleviated by appropriate treatment.

*Product of Abbott Laboratories.
†Product of Burroughs Wellcome and Company.

Treatment of Allergic Type

Sulfonamides and antibiotics do not influence the allergic group of cases. These cases are best treated by first determining the offending allergens and subsequent desensitization of the patient against the specific offending allergen. Hyposensitization is obtained by using the specific antigen, if identifiable, in low doses as advocated by Hansel.[2] Dosage is regulated by the severity of symptoms: the more severe the symptoms, the smaller the dose. As an illustration, subcutaneous injections of house dust extract are given twice each week, beginning with 0.1 cc. of 1:100,000,000 solution. In mild cases 1:1,000,000 solution may be used. This dosage is increased 0.05 to 0.1 cc. with each injection. This plan is followed until improvement occurs. When the patient is symptom free the injections are discontinued.

A useful drug for internal administration has been ephedrine sulfate. A useful combination is a capsule of ephedrine grain 3/8 with seconal grain 1/2. These are given three times daily with meals. I have not extensively used benadryl or pyribenzamine in nasal allergy because of side effects.

SUMMARY

An early and exact diagnosis of the type of sinus involvement is important.

Correction of marked septal deformities and relief of obstruction from nasal polyps is essential.

Antral irrigation to drain the sinus of infectious material by puncture or normal opening irrigation if displacement fails is necessary in some instances.

A naso-antral window to obtain prolonged drainage and facilitate irrigation of the sinus if it is resistant to simpler methods of treatment is recommended.

Avoidance of all factors, local, general, and dietary, which favor recurrence of the sinus involvement is imperative, as each successive attack is more difficult to recover from than the preceding.

Cytologic examination of the nasal discharge is of paramount importance in establishing the exact diagnosis and classification of the type of sinus involvement. Repeated cytologic examination is of value to detect residual allergic reaction after infection has been overcome and as an accurate check on the progress of the pathologic state within the nose and sinuses.

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ABSTRACT OF DISCUSSION

DR. OLIVER W. SUEHS, Austin: Probably no other phase of otolaryngology has been as much in need of clarification as has the diagnosis and treatment of chronic nasal and sinus disorders. As Dr. Gill has pointed out, ten years ago the vast majority of tissue swellings in the nose and sinuses were thought to exist because of infection, and many unnecessary radical surgical procedures were performed in cases which are now more apt to be recognized as being primarily functional or allergic states.

Also, otolaryngologists have learned that most chronic headaches are vascular in origin and that few originate from changes in the sinuses. This has resulted in a more conservative approach to the correction of this often troublesome complaint.

In the hyperactive or intumescent functional states with engorged red turbinates and increased mucoid secretion, it has also been learned that hypothyroidism, irritating atmospheres, excessive nasal medication, and so forth should be suspected. Obviously, surgical procedures are contraindicated and local therapy is of little value in the functional cases. Self administered nasal irrigation with normal saline solution gives temporary symptomatic relief and aids in weaning the patient from nose drops. Anthallan also has been helpful in my experience, although I do not fully understand its mode of action.

In the treatment of chronic suppurative sinusitis, I agree with Dr. Gill that the Proetz displacement method is probably the best available for ethmoid and frontal infections, but it is not as effective as irrigation for antral infections. If a chronic antrum does not clear up after four or five irrigations, a naso-antral window is usually indicated. Progressively fewer Caldwell-Luc operations seem indicated after first creating a naso-antral window.

Radical sinus operations are of course still indicated for mucocele, osteomyelitis, and suspected tumors of the paranasal sinuses.

Mississippi Valley Essay Contest

A cash prize of $100, a gold medal, and a certificate of award will be given for the best unpublished essay on any subject of general medical interest (including medical economics and education) and practical value to the general practitioner by the Mississippi Valley Medical Society in 1949. For the ninth year, this contest will be open to members of the American Medical Association who are residents and citizens of the United States. Essays must be in the hands of Dr. Harold Swanberg, Secretary, 209-224 W. C. U. Building, Quincy, Ill., by May 1.

BOOK COUPON PLAN FOR WAR TORN NATIONS

A plan to enable scientists, educators, and professional persons in war devastated countries to obtain needed periodicals, textbooks, and reference books on education, science, and culture from other countries has been launched on an experimental basis for one year, according to the January 21 issue of *Science*.

By using a book coupon scheme operated by UNESCO, groups in thirteen participating countries will be able to buy publications from "hard-currency" countries like the United States while making payments in their own national currency.

IRRADIATION OF THE NASOPHARYNX

A. N. CHAMPION, M.D., San Antonio, Texas

WHEN the otolaryngologist thinks of the nasopharynx, he should remember that it is only a part of the respiratory tract, and that all of these parts are continuous with each other. This consideration is important because infection in one readily leads to similar trouble in any of the others. Thus the nose and its accessory sinuses; the eustachian tube, middle ear, and mastoid; the three parts of the pharynx itself; and the lower respiratory tract are by continuity and histology almost inseparable. Clinically, this separation should not be attempted, but rather attention should be directed to that area in which recurrent infections most frequently start. Usually it is the pharynx that may be blamed. Perhaps that is true because it is so well supplied with lymphoid tissue, which not only seems susceptible to acute infections, but is also apt to harbor chronic infections.

Recognition of these facts leads to the surgical removal of the tonsils and adenoids. In skillful hands tonsillectomy is a successful procedure. Although the main mass of adenoids may be removed cleanly, more often than not islands of lymphoid tissue are left behind. The surgical attempt to remove them would produce such scarring and retraction that more harm than good would be done. If these nodules of benign lymphoid tissue are not infected, they do not offer a clinical problem. However, infection, if present, leads to hyperplasia which may be easily overlooked if a careful examination is not made with the nasopharyngoscope or postnasal mirror. Although it may regress, this tissue does not disappear with advancing age. In both acute and chronic infections it appears as red, elevated nodules or bands above the surface of the mucosa.

Apparently it is not the size of the nodules that is important, but rather their location, coupled with the degree and kind of infection. It is the latter factors that determine the tissue response in adjacent structures. Under the influence of infection there is an increase in the number of lymphocytes in the nodule, resulting in hyperplasia, as well as an edema of the submucosa due to blockage of the lymphatic tissue spaces. In addition, there is a marked increase in the secretory activity of the goblet cells and mucous glands.

The mechanical effect of these enlarged nodules is not as important as is the spread of infection along the mucosa or submucosa to nearby structures. Most otolaryngologists have seen the nasopharynx almost completely filled with benign or malignant new growths in patients with normal hearing, simply because the process has not invaded the eustachian tube or middle ear. This hyperplasia, edema, and excessive mucus may readily interfere with the normal ventilation of the middle ear, causing eustachian blockage, hyperemia of, or hemorrhage into the mucosa of the middle ear, or even exudate in that cavity. Any of these may lead to conduction deafness or to acute infection of the middle ear and mastoid. Similarly, the infection may extend forward to the nose and sinuses or downwards to the trachea and bronchi. Systemic disease thought to be caused by a focal infection may have its origin in these nodules. In this climate, most cases of acute sore throat and of the so-called coryza start first in the nasopharynx.

This inflammatory process may resolve completely, but if permitted to continue, it may result in fibrosis, scar tissue formation, and finally contraction. All of these lessen the patency of the eustachian tube and lead to adhesions in the middle ear. If these adhesions are at the tympanic entrance of the eustachian tube, around the annular ligament of the stapes, or about the joint between the malleus and incus, permanent conduction deafness may follow. Therefore, it is important that treatment be started before these irreversible changes have occurred.

RADIUM TREATMENT

Although surgical removal of this tissue is not always successful, treatment with a radium applicator offers a simple and safe method of attack. This is true because lymphoid tissue is so sensitive to irradiation that a small dose can be used. Many of the lymphoid nodules are located on the lateral wall of the nasopharynx so that the applicator can be easily placed in contact with the tissue to be treated. With a monel applicator containing 50 mg. of radium sulfate, virtually all of the alpha rays are filtered out, nearly all of the beta rays are absorbed within the first 3 mm. of tissue, and most of the gamma rays pass through the tissue without being absorbed. Since only those rays absorbed exert a therapeutic influence, beta irradiation is almost the sole concern. Therefore, the time of application is shortened, and only the superficial tissues are affected. The applicator itself is small, being less than 3 mm. in diameter, which makes its introduction fairly simple.

The following procedure is followed. Shrinkage of the nasal mucosa is accomplished with a neosynephrin spray. The nasal mucosa and pharynx are anesthetized with a spray of 2 per cent pontocaine. Rarely, where

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marked deviations or spurs of the nasal septum prevent easy passage of the applicator, a 5 per cent solution of cocaine in adrenalin is needed. After ten minutes the applicator can be placed in position without discomfort to the patient. It should be passed along the floor of the nose and under the posterior end of the inferior turbinate, until the postpharyngeal wall is reached. This places the distal end of the applicator containing the radium opposite the eustaments are given at intervals of two weeks. A month or two later it may be repeated if examination reveals insufficient shrinkage or lack of sufficient clinical improvement. Thereafter the patient should be examined every few months so that additional irradiation may be given if needed. This repeated observation and treatment is important because insufficient irradiation must be avoided if good results are to be obtained.

There are certain safeguards that must be followed to avoid injurious effects to the personnel handling

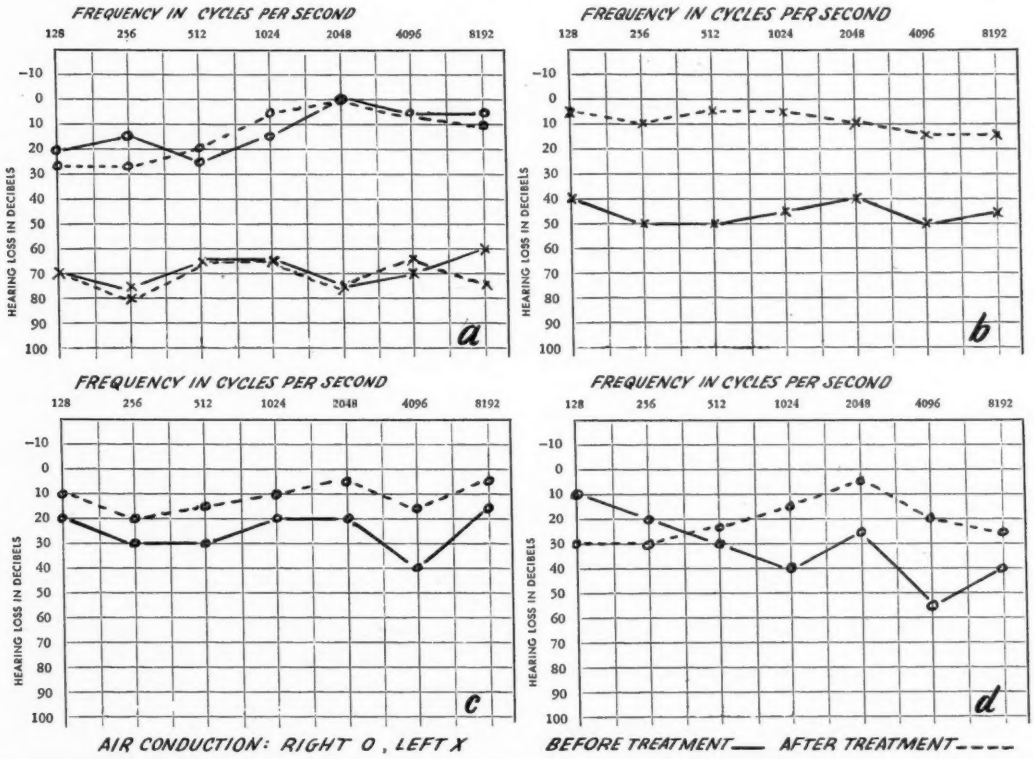

FIG. 1a. Audiogram showing no improvement in a child following irradiation after a tonsillectomy and adenoidectomy in a case of deafness of two years' duration.

b. Audiogram showing marked improvement following tonsillectomy and adenoidectomy and irradiation in a case of ear ache and deafness of four months' duration with frequent colds and sore throats.

c. Audiogram showing fair improvement after irradiation in an adult with chronic postnasal discharge and sore throats for eleven years, deafness and tinnitus for three months.

d. Audiogram showing improvement in an adult following irradiation for deafness of nine months' duration.

chian orifice and fossa of Rosenmuller. The proximal end of the applicator is fastened with adhesive tape to the tip of the nose. Its position in the nasopharynx is checked with a nasopharyngoscope passed through the other nostril or by use of the postnasal mirror. The applicator is left in position for twelve minutes on each side, timed by an alarm clock. Such a dose has been found to be sufficient to cause shrinkage of lymphoid tissue, but insufficient to cause injury to surrounding structures. Three such treatthe radium. In the first place, the applicator, when not in use, should be kept in its lead container. At all times the applicator should be handled by the proximal and never by the distal end. The introduction should be done quickly without undue handling of the applicator. If a small child is being treated, he should be wrapped in a sheet and his head held by the mother, so that none of the office personnel will be subjected to prolonged gamma irradiation. While the patient is being treated, doctor and nurses should

leave the room, as distance is one of the best safeguards. Finally, when the applicator is removed, it should be washed quickly, placed in alcohol, and then stored in the lead container. If these precautions are followed, there is little danger of harm to anyone handling the applicator.

INDICATIONS FOR IRRADIATION

Before the decision to use irradiation of the nasopharynx is reached, the otolaryngologist must decide that the patient has a disability which could be due to an infection of the lymphoid tissue of the nasopharynx. If it does exist, he must, by careful examination, locate hyperplastic lymphoid tissue in an area that could cause the disability. It is this combination of hyperplastic lymphoid tissue that may harbor infection coupled with any of the sequelae already mentioned that determines the indication for irradiation.

On the other hand, this procedure cannot be expected to remove a large mass of adenoids in the midline of the nasopharynx. These and infected tonsils should be removed by surgery. An associated chronic sinusitis should receive appropriate treatment as infected material passing through the posterior nares will continually reinfect the nasopharynx, eustachian orifices, and lower respiratory tract. Likewise, if irradiation is being used as an aid in the treatment of recurrent or chronic otitis media, the middle ear should not be neglected. If an allergy be present, it should receive the best treatment available, because allergy is a common cause of edema and hypertrophy of lymphoid tissue in this area. In other words, irradiation is not a cure-all, but only another method of attacking a problem that has confronted otolaryngologists for years.

An example of a case in which there was no improvement after irradiation appears in figure 1a. A 6 year old child had been deaf for two years. Following a tonsillectomy and adenoidectomy several months earlier, in which a large mass of adenoids was removed, irradiation was employed four times without improvement in hearing. Probably irreversible changes had occurred in the tube and middle ear.

EFFECTS OF IRRADIATION

The beneficial effects of irradiation are due to several factors. It has been determined that the greatest effect of irradiation is on the germinal centers of the lymph nodules, in which all new cells are formed. When irradiation arrests the production of young cells, the older ones soon die, leaving fewer lymphocytes and thus a smaller nodule. However, not all the young lymphocytes are destroyed, so that the nodule will eventually regenerate; hence, the necessity of repeated irradiation. Another effect of irradiation is the reduction of blockage in the lymphatic channels, resulting in a diminution of the edema of the nodule and adjacent tissues. Just as important to the decrease in size is the fact that such hypoplastic lymphoid tissue seems less susceptible to recurrent infections.

The results obtained by this therapy are variable. In the first place, shrinkage of the hyperplastic tissue can be observed in nearly all cases, but a few patients will have lymphoid tissue which is unusually resistant to irradiation. The reason for this poor response is not clear. Perhaps insufficient irradiation may be one of the causes, but certainly the replacement of lymphoid tissue by fibrous or scar tissue is another. Both of these could be obviated by earlier and more irradiation.

TABLE 1.—*Summary of Results following Irradiation of Nasopharynx.*

Indication	Improved	Unimproved	Incomplete Follow-Up
Deafness	29	16	10
Recurrent otitis media	7	0	1
Chronic otitis media	6	1	2
Eustachian blockage	8	1	1
Meniere's syndrome	2	0	0
Nasopharyngitis	17	0	6
Total	69	18	20

The best results are obtained in cases of deafness due to eustachian salpingitis of recent origin. Most of these patients will be children of school age. Figure 1b, for example, is an audiogram showing marked improvement in a 6 year old child who had had frequent colds and sore throat followed by ear ache and deafness of four months' duration. Irradiation was applied after a tonsillectomy and adenoidectomy. Health programs aimed at the detection of the hard of hearing which are not followed by an honest effort to correct those defects are useless.

Of course, even in civilian practice there will be patients with aerotitis. If it is recurrent and not relieved by simple measures, irradiation is indicated.

There are a few patients with tinnitus or dizziness which occurs only with blockage of the eustachian tube. If these symptoms are relieved by inflation, they may receive permanent relief from irradiation. The patient of figure 1c, who was 37 years of age, showed fair improvement following irradiation after suffering chronic postnasal discharge and sore throat for eleven years and deafness and tinnitus for three months.

There are certain patients with otosclerosis or nerve deafness, who, in addition, have discomfort due to blockage of the eustachian tube. Irradiation may relieve this discomfort, although it will have no effect on the original deafness. If irreversible changes have occurred in the eustachian tube or middle ear, per-

haps the best that can be expected is an arrest or slowing of the progress of the deafness. To many patients who have been becoming deafer and deafer, such an accomplishment would be welcomed. Yet years of observation will be required to determine whether that accomplishment is maintained.

All otolaryngologists see patients who have recurrent attacks of acute otitis media or others with chronic otitis media who do well until they have an acute upper respiratory tract infection. Many of these may be helped by irradiation. Its use is indicated in other patients with recurrent attacks of nasopharyngitis, some of whom develop sinusitis, others bronchitis or bronchial asthma. A 54 years old patient (figure 1d) who had been deaf for nine months showed improvement, especially in the higher frequencies, following three irradiation treatments. This improvement indicates that loss of hearing acuity for 4,096 double vibrations per second and above does not necessarily point to an inner ear lesion.

The complaint of postnasal discharge is common. If other causes for it cannot be found, irradiation should be used to diminish the activity of the goblet cells and mucous glands of the mucosa. Many patients, even those treated for other symptoms, volunteer the information that they have less postnasal discharge. As previously stated, in all of these patients, contributory causes should receive appropriate care and the presence of hyperplastic lymphoid tissue should be determined before irradiation is performed.

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1223 Medical Arts Building.

ABSTRACT OF DISCUSSION

DR. J. CHARLES DICKSON, Houston: I have been using this method of treatment for about five years. In reviewing my cases I find that the improvement in hearing after from ten to twelve years of deafness is slight. Between three and ten years the maximum results are apparent. This fact means that physicians should make every effort to see that cases of deafness are referred to a well trained otologist *early*. It is mainly a question of education of the public, the school authorities, and the profession.

Within the last year I have been using this procedure on adults who have difficulty in flying and recurring attacks of secretory catarrh. I have not made any tabulations, but I believe that in this group there is definite relief of symptoms in from 50 to 60 per cent of cases. The eustachian tubes are opened so that the patient no longer gets a blocked ear with each cold or with each air flight. However, these patients have had no improvement in hearing.

The earlier radium applicators used 50 mg. of radium in a filter to give mainly gamma rays. This applicator was left in place forty minutes for a 2 Gm. minute dose. It radiated the tissue in, around, and up the eustachian tube to a depth of 5 or 6 mm. The present monel .3 mm. thick metal applicator gives beta and gamma rays. This applicator is left in from six to eight and one-half minutes, and the rays act on tissue mainly on the surface and up to 2 to 3 mm. depths. I wonder with this type what happens in those cases in which the lymphoid tissue blocks the tube near the middle or in the bony section. Maybe some failures with the monel applicator are due to the fact that the irradiation does not reach the lymphoid tissue which is causing the trouble and only shrinks that on the surface near the mouth of the tube. Boies[1] has an excellent article on this phase of the problem.

DR. JOHN J. SHEA: I wish to mention the use of a nasopharyngeal applicator designed by Dr. John V. Blady, Memorial Hospital, New York.* I have used this applicator for ten years and have found it to be satisfactory. The amount of radium used is the same, 50 mg., by the insertion of sufficient needles to the amount of the necessary dosage. The value of the Blady applicator is of its greater radiation and its action upon the lateral bands as well as the eustachian tubes. Where monel applicators are used eight minutes to each side, this better filtered applicator can remain in for one hour with the same degree of safety. The choice between the two depends upon the extent of the hypertrophy of the tissue demanding radiation.

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ROENTGENOLOGIC STUDY OF THE COLON

Value of the Double Contrast Enema

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THE double contrast enema technique for colon studies is not a new procedure and we have nothing new to add to the already existing method. We submit our experiences only in an effort to stimulate further consideration and more general use of what we consider a vital part of any complete roentgenologic study of the large bowel.

TECHNIQUE

Probably the most important single factor connected with the proper conduct of a roentgenologic colon study is thorough and adequate cleansing of the large bowel. Various authorities have discarded the laxatives and enemas in preparation for a colonic study, but it has been our experience that it is practically impossible to render an unqualified, meaningful "negative" report following a study by all or any methods presently available in the presence of foreign material in the large bowel.

Our recommended preparation is as follows: The patient foregoes the evening meal and takes no fluid after 10 p.m. the evening prior to the examination. At 7 or 8 p.m. of the same evening the patient takes 2 ounces of castor oil, disguised, if he likes, to cover the taste. Beginning at 6 a.m. on the morning of the examination he takes a series of three soapsuds enemas at fifteen minute intervals. He may then eat a small breakfast at 7:30 a.m. and present himself for examination at 8 a.m.

The only departures allowed from this schedule are in case of contraindicating conditions such as acute severe diarrheas, severe hemorrhagic tendencies in the gastro-intestinal tract, and acute or subacute obstructions.

The apparatus used by us in the double contrast examinations consists of the usual tilt-table fluoroscopic machine with a "spot-taking" attachment, a 2 quart metal enema can of common design with an attached 3 or 4 foot rubber tube of adequate size, a suitable clamp for the tube, a Carman metal enema-tip, a rubber balloon with insufflating bulb attached and equipped with a ball valve to prevent back-flow of the air, and another Carman metal enema-tip with screw connections to fit the tube from the rubber balloon. For the opaque medium we prefer a suspension of one of the commercial preparations of barium sulfate containing a ready-mixed "suspending agent."

When ready, the enema-tip is inserted by an assistant and after a preliminary "scout-glimpse" of the abdomen, the barium solution, which has been previously heated to body temperature, is allowed to run slowly into the bowel. The opaque column is observed under the fluoroscope until it has just passed the splenic flexure, where the enema is stopped. The patient is then rotated to the right causing the barium to gravitate as far as the hepatic flexure. The patient is then sent to the toilet with instructions to evacuate "as quickly and as completely as possible" and return.

On the return to the fluoroscopic room, another "scout-glimpse" is taken to make sure that a sufficient amount of barium solution has been expelled. It is usually found that a small amount of barium has passed into the cecum, as a result of the patient's assuming the upright position and/or the expelling force in evacuation, and the rest of the colon will contain only a small remaining portion of the barium solution. Only rarely will it be necessary to send the patient for further evacuation.

If on the "scout-glimpse" conditions appear satisfactory, the enema-tip attached to the air-insufflation apparatus is inserted and the assistant injects air at a moderate, steady rate. During the insufflation the patient is warned to retain the air and notify the examiner of any undue fullness. The examiner observes the progress of the air fluoroscopically, tilts the table, and rotates the patient if necessary to obtain the even distribution of the remaining barium solution and also to observe the best position for taking films to the best advantage. When the colon has been sufficiently filled with air, the patient is again exhorted to retain the air and stereoscopic films are made in both the prone and supine positions or in other positions found to be more advantageous by the fluoroscopic observations.

INDICATIONS

It is noteworthy that even among roentgenologic contributions to the literature on the subject of diagnosis of colonic diseases the double contrast enema method is mostly by-passed with a few words stating that it is "of great value in diagnosing small polyps." In the considerable literature we have covered, only

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in the writings of Weber and of Gershon-Cohen and Shay have we found the method receiving the adequate attention we think it merits. Only in the writings of Gershon-Cohen and Shay have we found the method recommended for routine use.

We think the ideal routine study of the colon should include the double contrast enema, either as a supplement to the plain barium enema or as the

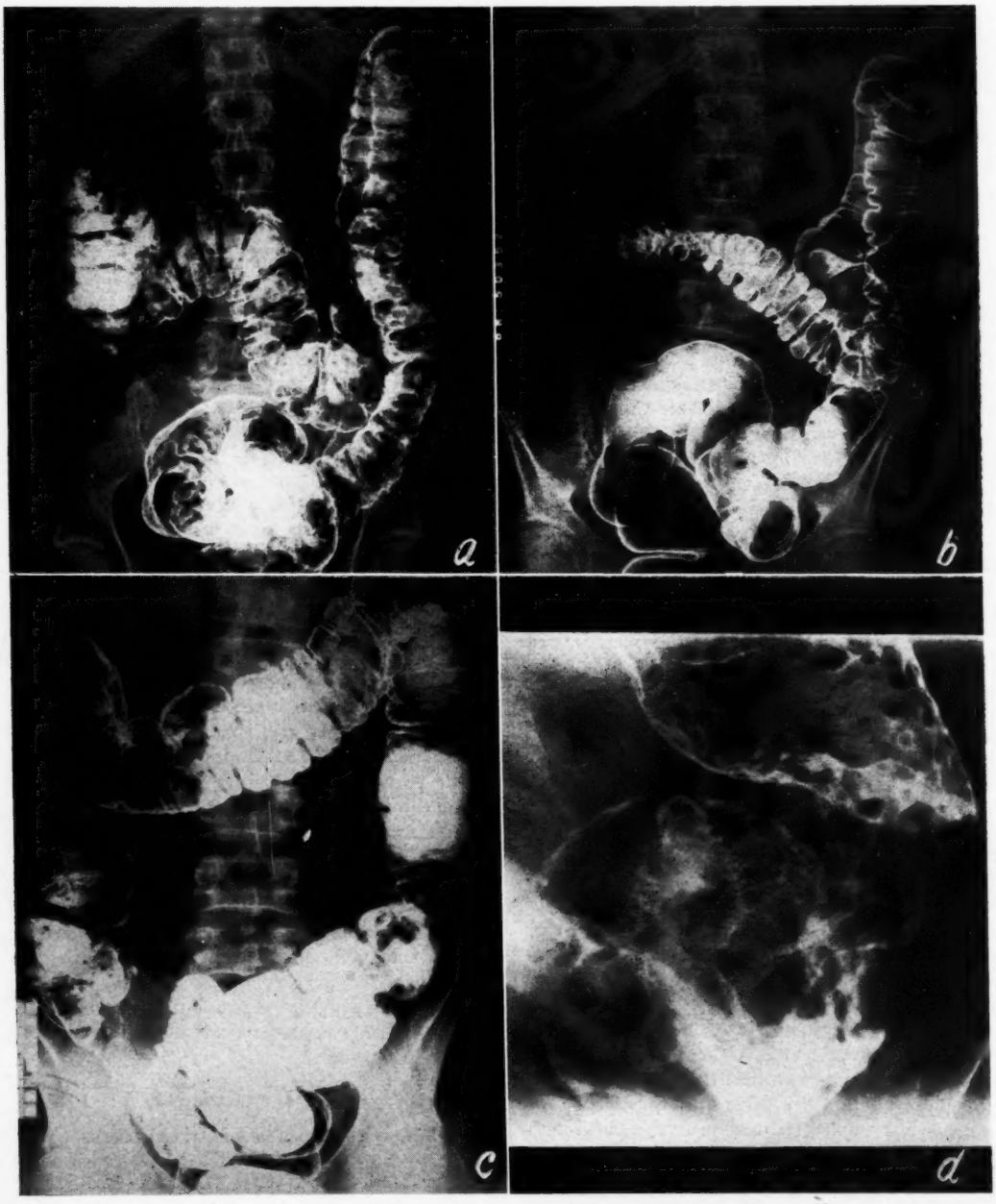

FIG. 1a. Double contrast study of a patient referred on suspicion of multiple polyps. Note the similarity to *c*.

b. The same patient after adequate preparation. Note the absence of any shadows simulating polyps.

c. Multiple polyps throughout the colon. Note the accompanying carcinoma in the sigmoid region.

d. Spot film of sigmoid region seen in (*c*) with adenocarcinoma, grade 2, and accompanying polyps.

primary examination, with the previously described preexamination preparation instituted prior to each examination. We realize fully both the implications of such a statement and impracticability of such a procedure as a routine measure in roentgenologic departments where a large number of colons are being examined daily, but such a situation cannot alter the requirements of a complete, conscientious study.

Where conditions are such that routine use cannot be made of the method, it is certainly indicated in every case of gastro-intestinal bleeding or in the presence of gastro-intestinal symptoms not adequately explained. We also find it extremely useful in adequately studying any lesion in the colon even though the lesion has been previously discovered by other means. Using the double contrast examination, on numerous occasions we have been able to supply valuable information to the clinician that could not be gained from the barium enema alone.

PITFALLS AND ERRORS

The double contrast enema technique is not difficult, but to obtain uniformly good results observance of various maneuvers, which are best learned by experience, must be practiced. The common errors may be divided into errors of technique and errors of interpretation.

Errors of Technique

Errors of technique include the following:

1. Inadequate preparation is probably the greatest bar to obtaining good double contrast studies. If the presence of foreign material in the large bowel can be determined prior to the injection of air, we do not attempt to complete the examination but require the patient to return for reexamination after adequate preparation as previously described.

2. Over-filling with barium or air will spoil the end results. We have found that filling the cecum with barium prior to air insufflation in a high percentage of cases causes extrusion of barium into the terminal ileum either at the time of filling or at the time of evacuation. It also results in inadequate expulsion of barium, requiring further attempts at evacuation with resulting loss of time, excessive drying of the barium coating the bowel wall, and obscuring of details by the filled terminal ileum. Filling of the terminal ileum with even a small amount of barium seems to leave the ileocecal valve patent for entrance of later induced air.

Allowing barium to enter only to a point just proximal to the splenic flexure and distribution of the medium through the transverse colon to the hepatic flexure by rotation of the patient to different positions minimizes the possibility of this complication and still allows sufficient barium coating for the cecal walls.

Too extensive filling with air will cause a similar result, cause undue discomfort to the patient, induce rapid expulsion of air, and in certain instances may cause irreversible damage.

3. Speed is essential in performing the double contrast study. If the patient is allowed to linger at evacuation it will be found that the barium will dry too much, and the films will show a mosaic coating on the walls of the bowel which resembles paint cracking and peeling from a plaster wall. This will obscure mucosal detail and, if extensive, make interpretation impossible.

FIG. 2. Carcinoma of the sigmoid with a typical picture of perforation. Note the proximal tapering end of the lesion as compared to the abrupt change at the distal end.

4. Failure to indicate to the technician the proper positions for obtaining the best projections, poor radiographic technique on the part of the technician, or failure to take stereoscopic views in both prone and supine or especially indicated positions may result in failure to visualize lesions being sought and completely nullify a well performed operation.

Errors of Interpretation

Errors of interpretation include the following:

1. The errors in interpretation depend to a great degree on the experience and acuity of the interpreter, and for this we can offer no solution other than careful and conservative study of the findings. However, the better the technique, the fewer will be the technical bars to proper interpretation.

2. Inadequate preparation will result in the foreign material in the bowel casting shadows that are impossible to interpret or result in false interpretations. We have found numerous instances in which patients have given a history of using oil laxatives over a long period of time, and on double contrast studies, shad-

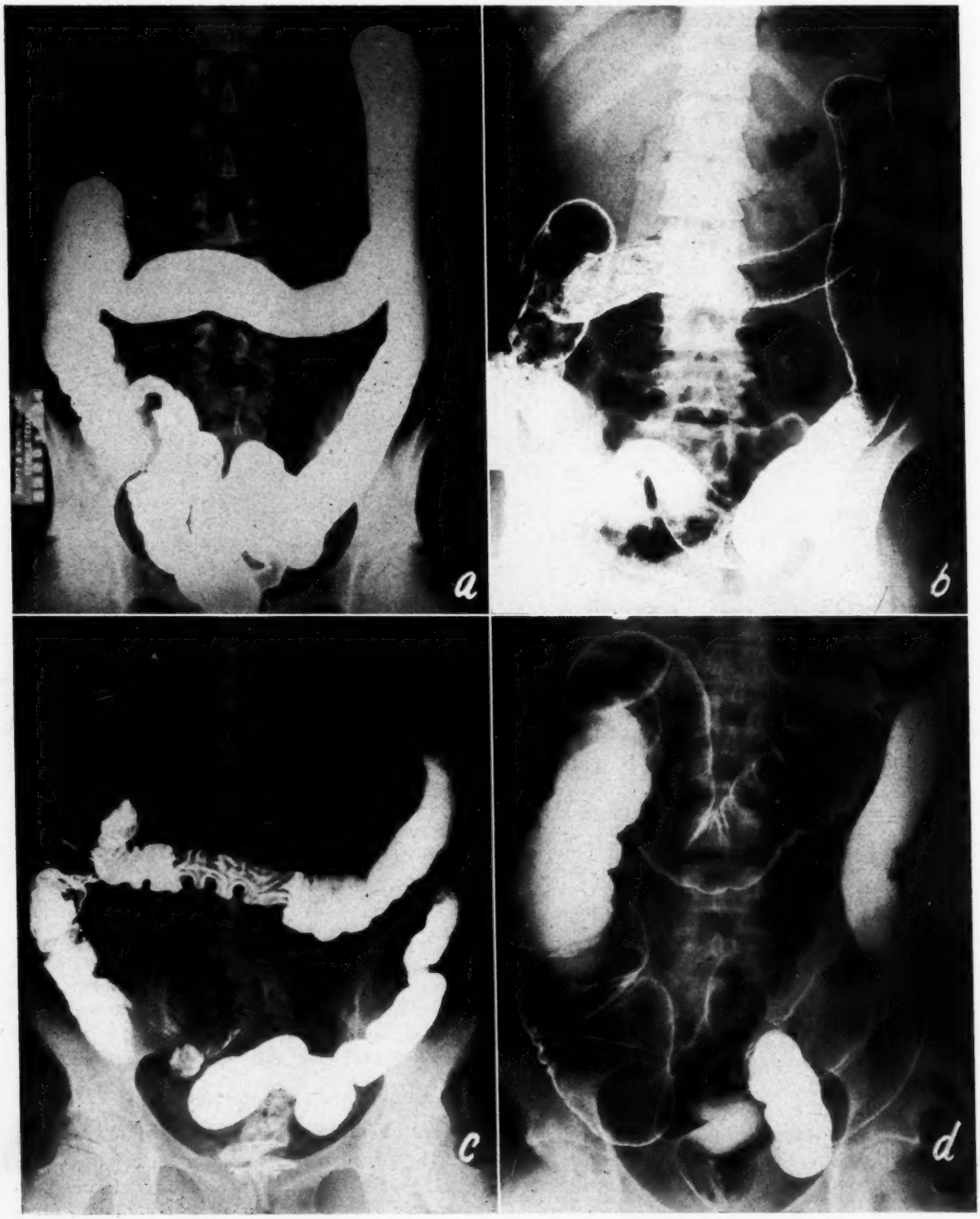

FIG. 3a and b. Chronic ulcerative colitis involving the entire colon shown by a plain barium enema (*a*), and a double contrast study demonstrating the granular appearance of mucosa denoting the healing stage (*b*).

c. Evacuation film of the colon in a patient suspected of having amebiasis. Note the "fuzzy" contracted appearance of the cecum.

d. Double contrast colon study in the same patient showing the cecum to have normal contour and mucosa.

ows have been seen which are indistinguishable from shadows cast by small polyps. The change in position of these shadows as viewed in the supine and prone stereo-projections will eliminate these shadows as being due to organic lesions in a majority of cases, but in a substantial percentage reexamination is necessary to eliminate this possibility.[4] As far as we are concerned there is absolutely no substitute for adequate preexamination preparation and we cannot stress too greatly the importance of reexamination in cases in which any particle of doubt might exist as to the correctness of the interpretation (fig. 1a and b).

3. Attempts to diagnose lesions in the rectum and lower sigmoid, even with the greater advantages offered with the double contrast technique, can only result in grief to the roentgenologist and the patient in a great number of instances. The responsibility for the diagnosis of lesions in this area should be placed on the proctologist, who can visualize the area directly with the sigmoidoscope, and the roentgenologist should confine himself to confirming the proctologist's findings, if possible, or pointing a suspicious finger to this area when deformities are visualized fluoroscopically or on films.

4. Deformities due to spasm may be differentiated by the use of antispasmodics and repeated examination, and they should not offer too great difficulties.

DISCUSSION

As previously stated, we have found the double contrast enema of inestimable value in the study of all lesions of the colon either as the primary examination or as a supplemental study to the plain barium enema. As pointed out by Weber[14] and others, it is the cardinal method for detection of polyps and polypoid lesions of the colon. Not one of the large reference volumes on roentgenology that we have seen contains an adequate discussion of the double contrast enema technique, and a short commentary on some of the varied conditions in which we have used the method may be of interest.

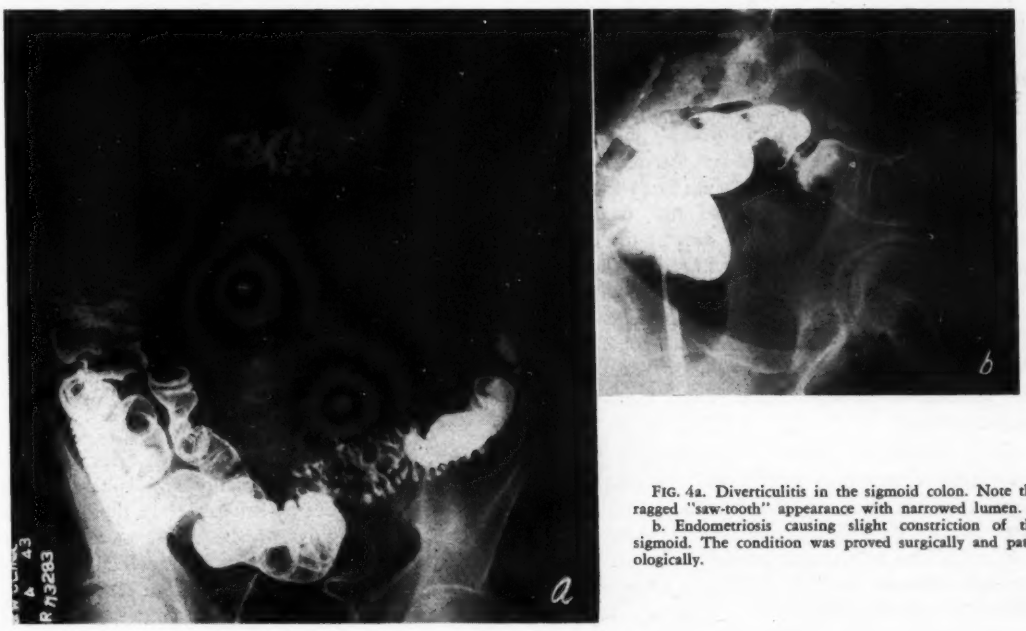

FIG. 4a. Diverticulitis in the sigmoid colon. Note the ragged "saw-tooth" appearance with narrowed lumen.
b. Endometriosis causing slight constriction of the sigmoid. The condition was proved surgically and pathologically.

Polyps and Polypoid Lesions

As pointed out by Weber,[9, 14] polypoid lesions (fig. 1c and d) may originate from any one of the tissue elements of the intestinal wall and may represent hemangiomas, fibromas, lipomas, myomas, or adenomas. Multiple polypoid lesions in the intestinal tract are, almost without exception, adenomas. Smedal[13] gave an incidence of polyps found at autopsy as from 2 to 6 per cent and stated that of 827 cases of malignant disease of the colon seen at the Lahey Clinic in 1939, 14 per cent were malignant adenomas which arose from polyps.

Roentgenologically the significant characteristics of polypoid lesions are their intraluminal, nondeformity producing location, and with the double contrast enema they appear as soft, rounded or lobulated masses

with a surface coating of the opaque medium. In such lesions, with the barium enema, the only sign may be a momentary "splitting" of the head of the opaque column, which may readily be overlooked. Otherwise, to show a defect the walls of the intestine must be approximated by the palpating hand, as is done in locating such lesions in the stomach. These defects may be single or multiple. Weber stated that such lesions of 1 cm. or less will usually elude detection with the plain barium enema examination.

Carcinoma

Weber[2, 15] has given a thorough discussion of the roentgenologic manifestations of the various types of carcinoma that involve the colon and of perforating lesions of the colon (fig. 1c and d and 2). He pointed out that these lesions can be demonstrated roentgenologically before they cause symptoms. Gershon-Cohen and Shay[5, 6, 12] stated that the barium enema fails in less than 10 per cent of the cases in establishing the diagnosis of carcinoma of the colon, but that many of these missed lesions can be demonstrated by the use of the double contrast enema. They cited 7 lesions in 500 cases that could not be demonstrated in any other way. They recommended the use of this method routinely as a check on the barium enema.

In a number of patients who appeared to have completely obstructing lesions with the use of the barium enema alone, we have been able to inject air, after evacuation, which passed through the canalized portion of the lesion and carried sufficient barium through to make possible good visualization of the deformity and proximal loop of intestine. This procedure made possible a differentiation between malignant and inflammatory lesions, with distinct advantage to the clinician. In this type of maneuver, Case[1] sounded a warning against overdistension with air, having seen 2 cases in which perforation occurred. We have not seen this happen if air was injected with care, under fluoroscopic control. In this type of case we never use the Bardex colon tube.

Chronic Ulcerative Colitis

Weber[16] and Weber and Bargen[18] have offered valuable contributions on chronic ulcerative colitis and have attempted a correlation of clinical and roentgenologic data. Weber recommended air contrast studies in individual cases as indicated. Gershon-Cohen[4] reported on early ileocecal tuberculosis studies with the double contrast enema and stated that this method gives a better conception of the pathologic process and makes possible many details not visualized with the plain barium enema.

It has been our experience that in any lesion involving the mucous membrane of the colon the double contrast studies are of distinct value, especially where visualization of the condition of the mucosa is of prognostic value. In certain types of chronic ulcerative colitis, pseudopolyposis is said to occur in 10 per cent of the cases; the polyposis and the healing granular states are well visualized with the double contrast method (fig. 3a and b).

Weber,[16] Druckmann and Schorr,[3] Golden and Ducharme,[7] and many others have written concerning amebic involvement of the colon. All agreed that a definite differential diagnosis cannot be made roentgenologically but that the suspicion of the clinician may be directed toward this condition by roentgenologic findings. Golden and Ducharme made the following observations: "Although we have no statistics to prove it, our experiences indicate that cecal studies made following the ingestion of barium are more satisfactory and accurate than those made with the barium enema." We do not consider ourselves astute enough to differentiate the usual deformities on the cecum seen with the incomplete filling following the ingestion of barium from the deformities caused by early amebic infections. We feel safer in basing our suspicions on deformities seen fluoroscopically with the barium enema and confirmed by subsequent double contrast studies (fig. 3c and d).

Diverticulitis

Resection of masses resulting from diverticulitis is accompanied by high mortality and is rarely indicated, as pointed out by Schatzki.[11] In these cases an intact mucosa can usually be demonstrated by the double contrast method (fig. 4a), which also aids in differentiating this condition from carcinoma, especially where perforation is an accompaniment of the cancer. The simultaneous occurrence of diverticulitis and carcinoma or diverticulitis and polyps must ever be kept in mind.

Lymphogranuloma Venereum

Although of not too frequent occurrence and usually affecting the rectum and sigmoid, lymphogranuloma venereum lesions sometimes appear higher in the colon, accompanied by positive Frei tests. The double contrast enema is of distinct value in demonstrating the extent of the lesion and the destruction of the mucosa. Klein[10] has discussed this condition and reported 24 additional cases studied roentgenologically.

Endometriosis

Jenkinson and Brown[8] concluded from their study of endometriosis that from 2 to 4 per cent of all women will develop endometriosis of the sigmoid or rectum and that about 50 per cent of all such lesions will cause a degree of constriction. They stressed the

importance of roentgenologic examinations during menstruation and in the intervals to demonstrate changes in a constricting lesion. These lesions occur most frequently in the age group from 30 years to menopause, with associated sterility and menstrual disturbances. A deformity of the colon in association with such a history is highly suggestive of such a condition. Double contrast studies are of definite value in demonstrating these lesions in the rectosigmoid region (fig. 4b) where visualization by other methods is not too satisfactory at the best.

Extrinsic Lesions

Occasionally difficulty is encountered in the study of lesions so closely associated with the large bowel that they might appear to be either intrinsic or extrinsic. The double contrast enema with stereoscopic views has been of value in aiding us to make a differentiation.

SUMMARY

The preparation and the technique for performing the double contrast enema study of the large bowel have been presented with a short discussion of some of the conditions in which we have found the procedure useful. A few of the more common pitfalls encountered in making such a study are presented. The value of adequate preexamination preparation and repeated examinations is stressed.

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ABSTRACT OF DISCUSSION

DR. M. C. ARCHER, Fort Worth: The authors thoroughly cover the importance of proper preparation prior to the examination. Often this is overlooked or its importance not properly stressed to the patient. The writers emphasize that castor oil and soapsuds enemas are not used in severe diarrhea, severe hemorrhagic tendencies in the gastro-intestinal tract, and acute or subacute obstructions; this point is well taken.

I have followed the procedure described of stopping the flow of barium just after it has passed the splenic flexure, then rotating the patient, causing the barium to gravitate into the hepatic flexure. The double contrast films have been superior to the usual method. Also, neoplastic lesions have been demonstrated clearly with the stereoscopic double contrast films, both in the prone and supine positions. These lesions were not clearly shown with the preevacuation and postevacuation films, yet they were clearly demonstrated during fluoroscopic examination.

Another significant point I believe should be stressed. If double contrast enema is to be done, this should be considered before starting the barium enema in order that the flow of barium may be stopped just after it has passed the splenic flexure. After the cecum has become well filled with barium, the double contrast films frequently are not of much diagnostic aid.

If double contrast enemas are not routine procedure, they are certainly indicated when there is history of bleeding or diarrhea or neoplastic lesions. At times it is necessary to repeat double contrast enemas to demonstrate the presence of multiple polyposis. The stereoscopic double contrast films, both in the prone and supine position, are of inestimable value in many cases.

Thrombopenia Therapy

Toluidine blue, a dye used to combat bleeding from overexposure to radiation, is valuable in treating selected cases of thrombopenia, say three doctors from the Shreveport, La., Charity Hospital.

Writing in the January 22 issue of *The Journal of the American Medical Association,* J. E. Holoubek, M. D., a fellow of the American College of Physicians, J. V. Hendrick, M. D., and W. J. Hollis, M. D., describe a trial of the dye on 3 patients suffering from bleeding associated with thrombopenia.

One of the patients, apparently dying despite repeated blood transfusions, recovered dramatically and was discharged from the hospital as cured. Even though the dye did not save the lives of the 2 other patients, it stopped bleeding in 1, the doctors say. Its complete failure in 1 case may be explained by the absence of anticoagulant substances in the patient's blood, they suggest. Research indicates that toluidine blue makes at least one such substance inactive.

News

COMING MEETINGS AND CLINICS

State Medical Association of Texas, San Antonio, May 2-5, 1949. Dr. Tate Miller, Dallas, Pres.; Dr. Harold M. Williams, 700 Guadalupe St., Austin, Secy.

American Medical Association, Atlantic City, June 6-10, 1949. Dr. R. L. Sensenich, South Bend, Ind., Pres.; Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secy.

NATIONAL AND REGIONAL

American Academy of Allergy. Dr. Will C. Sprain, New York, Pres.; Dr. Theodore L. Squier, 424 E. Wisconsin Ave., Milwaukee, Secy.

American Academy of Dermatology and Syphilology. Dr. Francis E. Senear, Chicago, Pres.; Dr. Earle D. Osborne, 471 Delaware Ave., Buffalo, N. Y., Secy.

American Academy of General Practice, Cincinnati, March 7-9, 1949. Dr. Paul A. Davis, Akron, Ohio, Pres.; Dr. Mac F. Cahal, 20 N. Wacker Drive, Chicago 6, Executive Secy.

American Academy of Neurological Surgery. Dr. William S. Keith, Toronto, Canada, Pres.; Dr. T. C. Erickson, 1300 University Ave., Madison 5, Wis., Secy.

American Academy of Ophthalmology and Otolaryngology. Dr. Conrad Berens, New York, Pres.; Dr. W. L. Benedict, 100 First Ave. Bldg., Rochester, Minn., Secy.

American Academy of Pediatrics. Dr. Warren R. Sission, Boston, Pres.; Dr. C. G. Grulee, 636 Church St., Evanston, Ill., Secy.

American Association for Thoracic Surgery, New Orleans, March 29-31, 1949. Dr. E. D. Churchill, Boston, Pres.; Dr. Brian Blades, 1335 H St. N. W., Washington, D. C., Secy.

American Association of Genito-Urinary Surgeons, White Sulphur Springs, May 9-11, 1949. Dr. Clyde L. Deming, New Haven, Pres.; Dr. Norris J. Heckel, 122 S. Michigan Ave., Chicago 3, Secy.

American Association of Obstetricians, Gynecologists, and Abdominal Surgeons. Dr. Robert D. Mussey, Rochester, Minn., Pres.; Dr. L. A. Calkins, University of Kansas Medical Center, Kansas City 3, Secy.

American Cancer Society. Dr. Clifford C. Nesselrode, Kansas City, Kan., Pres.; Mr. Charles D. Hilles, 47 Beaver St., New York, Secy.

American College of Physicians, New York, March 28-April 1, 1949. Dr. Walter W. Palmer, New York, Pres.; Mr. F. R. Loveland, 4200 Pine St., Philadelphia 4, Secy.

American College of Radiology, Atlantic City, June 5, 1949. Dr. E. P. Pendergrass, Philadelphia, Pres.; Mr. W. C. Stronach, 20 N. Wacker Drive, Chicago 6, Secy.

American College of Surgeons. Dr. Arthur W. Allen, Boston, Pres.; Dr. Paul B. Magnuson, 40 E. Erie St., Chicago 11, Secy.

American Congress of Physical Medicine. Dr. H. Worley Kendell, Chicago, Pres.; Dr. Richard Kovacs, 2 E. 88th St., New York 28, Secy.

American Dermatological Association. Dr. Harry R. Foerster, Milwaukee, Pres.; Dr. L. A. Brunsting, 102 2nd. Ave., S. W., Rochester, Minn., Secy.

American Gastro-Enterological Association, Atlantic City, June 3-4, 1949. Dr. A. F. R. Andresen, Brooklyn, Pres.; Dr. Dwight L. Wilbur, 655 Sutter St., San Francisco, Secy.

American Gynecological Society. Dr. Edward A. Schumann, Philadelphia, Pres.; Dr. Howard Taylor, Jr., 842 Park Ave., New York 21, Secy.

American Hospital Association. Mr. Joseph G. Norby, Milwaukee, Pres.; Mr. George P. Bugbee, 18 E. Division St., Chicago, Executive Secy.

American Laryngological, Rhinological, and Otological Society, Chicago, April, 1949. Dr. John J. Shea, Memphis, Tenn., Pres.; Dr. C. S. Nash, 277 Alexander St., Rochester 7, N. Y., Secy.

American Neurological Association. Dr. Stanley Cobb, Boston, Pres.; Dr. H. Houston Merritt, 710 W. 168th St., New York 32, Secy.

American Ophthalmological Society, Hot Springs, Va., June 2-4, 1949. Dr. Bernard Samuels, New York, Pres.; Dr. M. C. Wheeler, 30 W. 59th St., New York, Secy.

American Orthopedic Association, Colorado Springs, May 18-21, 1949. Dr. R. K. Ghormley, Rochester, Minn., Pres.; Dr. C. Leslie Mitchell, Henry Ford Hospital, Detroit 2, Secy.

American Pediatric Society, Atlantic City, May 5-6, 1949. Dr. Jean V. Cooke, St. Louis, Pres.; Dr. Henry G. Poncher, 1819 W. Polk St., Chicago 12, Secy.

American Proctologic Society. Dr. Harry E. Bacon, Philadelphia, Pres.; Dr. W. Wendell Green, 1838 Parkwood Ave., Toledo 2, Secy.

American Psychiatric Association, Montreal, Canada, May 23-27, 1949. Dr. W. C. Menninger, Topeka, Kan., Pres.; Dr. Leo H. Bartemeier, General Motors Bldg., Detroit, Secy.

American Public Health Association, New York, Oct. 24-28, 1949. Dr. Charles F. Wilinsky, Boston, Pres.; Dr. R. M. Atwater, 1790 Broadway, New York 19, Secy.

American Society of Anesthesiologists. Dr. H. Boyd Stewart, Tulsa, Okla., Pres.; Dr. Curtis B. Hickcox, 188 W. Randolph St., Chicago, Secy.

American Society of Clinical Pathologists. Dr. Osborne A. Brines, Detroit, Pres.; Dr. Clyde G. Culbertson, Indiana University School of Medicine, Indianapolis, Secy.

American Surgical Association, St. Louis, April 20-22, 1949. Dr. Fred W. Rankin, Lexington, Ky., Pres.; Dr. Nathan Womack, University of Iowa, Iowa City, Secy.

American Urological Association, Los Angeles, May 16-19, 1949. Dr. Charles C. Higgins, Cleveland, Pres.; Dr. T. D. Moore, 899 Madison Ave., Memphis 3, Tenn., Secy.

International College of Surgeons, U. S. Chapter, Atlantic City, Nov. 8-11, 1949. Dr. Curtis L. Hall, Washington, D. C., Pres.; Dr. Arnold S. Jackson, 16 S. Henry St., Madison, Wis., Secy.

National Tuberculosis Association, Detroit, May 2-6, 1949. Dr. Herbert L. Manz, Kansas City, Mo., Pres.; Dr. H. Stuart Willis, 1790 Broadway, New York 19, Secy.

Radiological Society of North America. Dr. L. Henry Garland, San Francisco, Pres.; Dr. D. S. Childs, Medical Arts Bldg., Syracuse 2, N. Y., Secy.

Southern Medical Association, Cincinnati, Nov. 14-19, 1949. Dr. Oscar B. Hunter, Washington, D. C., Pres.; Mr. C. P. Loranz, 1020 Empire Bldg., Birmingham, Ala., Secy.

Southern Psychiatric Association. Dr. Guy F. Witt, Dallas, Pres.; Dr. Newdigate M. Owensby, 384 Peachtree St. N. E., Atlanta, Ga., Secy.

Southern Surgical Association. Dr. Alfred Blalock, Baltimore, Pres.; Dr. John C. Burch, 2112 West End Ave., Nashville, Tenn., Secy.

Southwest Allergy Forum, El Paso, April 4-5, 1949. Dr. Sim Hulsey, Fort Worth, Pres.; Dr. O. E. Egbert, First National Bank Bldg., El Paso, Secy.

Southwestern Medical Association. Dr. Joseph M. Greer, Phoenix, Ariz., Pres.; Dr. Wickliffe R. Curtis, First National Bank Bldg., El Paso, Secy.

Southwest Regional Cancer Conference, Fort Worth, Nov. 9, 1949. Secy., 209 Medical Arts Bldg., Fort Worth.

United States-Mexico Border Public Health Association, Nogales, Ariz., and Nogales, Mexico, 1949. Dr. Victor Ocampo Alonzo, Hermosillo, Mexico, Pres.; Dr. M. F. Haralson, 314 U. S. Court House, El Paso, Secy.

STATE

Texas Academy of General Practice, San Antonio, May 2, 1949. Dr. J. B. Copeland, San Antonio, Pres.; Dr. W. P. Higgins, Jr., Medical Arts Bldg., Fort Worth, Secy.

Texas Air-Medics Association, San Antonio, May 1-2, 1949. Dr. Thomas J. Cross, Fort Worth, Pres.; Dr. C. F. Miller, 906 Medical Arts Bldg., Waco, Secy.

Texas Association of Obstetricians and Gynecologists, Dallas, 1949. Dr. Julius McIver, Dallas, Pres.; Dr. George F. Adam, 4115 Fannin, Houston, Secy.

Texas Chapter, American College of Chest Physicians, San Antonio, May 2, 1949. Dr. Elliott Mendenhall, Dallas, Pres.; Dr. Charles J. Koerth, Kerrville, Secy.

Contributions to this department will be appreciated. News should be of general medical interest, such as public health activities, new hospitals, personal items of more than local value, and so forth. News for a particular number of the Journal should be in the hands of the Editor not later than the fifteenth of the preceding month.

Texas Club of Internists. Dr. Julian C. Barton, San Antonio, Pres.; Dr. Victor E. Schulze, 219 S. Magdalen St., San Angelo, Secy.

Texas Dermatological Society, San Antonio, May 2, 1949. Dr. D. T. Gandy, Houston, Pres.; Dr. W. Harris Connor, 601 Medical Arts Bldg., Houston, Secy.

Texas Diabetes Association, San Antonio, May 1-2, 1949. Dr. J. Shirley Sweeney, Gainesville, Pres.; Dr. W. N. Powell, W. Ave. F, Temple, Secy.

Texas Division, American Cancer Society, Fort Worth, Nov., 1949. Mr. Frank C. Smith, Houston, Pres.; Mrs. Jack Hutchins, El Campo, Secy.

Texas Heart Association, San Antonio, May 2, 1949. Dr. Walter B. Whiting, Wichita Falls, Pres.; Dr. Merritt B. Whitten, 1421 Medical Arts Bldg., Dallas, Secy.

Texas Hospital Association, Galveston, April 19-21, 1949. Mr. C. J. Hollingsworth, Lubbock, Pres.; Mrs. Ruth Barnhart, 2210 Main St., Dallas, Secy.

Texas Neuropsychiatric Association, San Antonio, May 2, 1949. Dr. M. J. Cooper, San Antonio, Pres.; Dr. David Wade, 510 Capital National Bank Bldg., Austin, Secy.

Texas Orthopedic Association, San Antonio, May 2, 1949. Dr. Ruth Jackson, Dallas, Pres.; Dr. Margaret Watkins, 3629 Fairmount St., Dallas, Secy.

Texas Pediatric Society, San Antonio, October, 1949. Dr. John Glen, Houston, Pres.; Dr. James Walker, 3616 Tulsa Way, Fort Worth, Secy.

Texas Public Health Association. Dr. Austin E. Hill, San Antonio, Pres.; Mr. Earle W. Sudderth, Dallas County Health Department, Court House, Dallas, Executive Secy.

Texas Radiological Society, Dallas, Jan., 1950. Dr. J. J. Faust, Tyler, Pres.; Dr. R. P. O'Bannon, 650 Fifth Ave., Fort Worth, Secy.

Texas Railway and Traumatic Surgical Association, San Antonio, May 2, 1949. Dr. Denman C. Hucherson, Houston, Pres.; Dr. W. F. Parsons, First National Bank Bldg., Fort Worth, Secy.

Texas Rheumatism Association, San Antonio, May 2, 1949. Dr. Howard C. Coggeshall, Dallas, Pres.; Dr. J. Paul Thomas, Medical Arts Bldg., Dallas, Secy.

Texas Society for Mental Hygiene, Dallas, March 3-5, 1949. Dr. Ozro T. Woods, Dallas, Pres.; Mrs. Elizabeth F. Gardner, 1617 Watchhill Road, Austin 21, Executive Secy.

Texas Society of Anesthesiologists, San Antonio, May 2, 1949. Dr. J. C. Youngblood, Houston, Pres.; Dr. H. C. Slocum, 928 Strand, Galveston, Secy.

Texas Society of Gastroenterologists and Proctologists, San Antonio, May 2, 1949. Dr. Alvin Baldwin, Dallas, Pres.; Dr. Carl Giesecke, 1602 Nix Professional Bldg., San Antonio, Secy.

Texas Society of Ophthalmology and Otolaryngology, San Antonio, December, 1949. Dr. August J. Streit, Amarillo, Pres.; Dr. John L. Matthews, 929 Nix Professional Bldg., San Antonio, Secy.

Texas Society of Pathologists. Dr. W. W. Coulter, Sr., Houston, Pres.; Dr. C. T. Ashworth, 604 Medical Arts Bldg., Fort Worth, Secy.

Texas State Urological Society, Houston, 1950. Dr. Charles Simpson, Temple, Pres.; Dr. Tryon Robinson, 920 Westheimer, Houston 6, Secy.

Texas Surgical Society, Houston, April 5-6, 1949. Dr. E. P. Bunkley, Stamford, Pres.; Dr. Truman G. Blocker, 927 Strand, Galveston, Secy.

Texas Tuberculosis Association, Tyler, April 8-9, 1949. Dr. Elliott Mendenhall, Dallas, Pres.; Miss Pansy Nichols, 208 E. Ninth, Austin, Executive Secy.

DISTRICT

Second District Society. Dr. R. B. G. Cowper, Big Spring, Pres.; Dr. Carl Uthoff, Big Spring, Secy.

Third District Society, Amarillo, April 12-13, 1949. Dr. C. E. High, Pampa, Pres.; Dr. Kenneth Flamm, Amarillo, Secy.

Fourth District Society, San Angelo, October, 1949. Dr. J. C. Young, Coleman, Pres.; Dr. Charles F. Bailey, Ballinger, Secy.

Fifth and Sixth Districts Society, Corpus Christi, July, 1949. Dr. D. R. Knapp, Kerrville, Pres.; Dr. Charles Tennison, Nix Professional Bldg., San Antonio, Secy.

Seventh District Society. Dr. David Wade, Austin, Pres.; Dr. Joe W. Bailey, 1411 San Antonio St., Austin, Secy.

Eighth District Medical Society. Dr. Leonard Johnson, El Campo, Pres.; Dr. Robert Casey, Texas City, Secy.

Tenth District Medical Society. Dr. J. A. Richardson, Sr., Jasper, Pres.; Dr. Dale H. Davies, Liberty, Secy.

Eleventh District Society, Henderson, April 14, 1949. Dr. Lynn Hilbun, Hender..., Pres.; Dr. C. B. Young, 929 S. Confederate, Tyler, Secy.

Twelfth District Society. Dr. R. R. White, Temple, Pres.; Dr. H. F. Connally, Jr., Amicable Bldg., Waco, Secy.

Thirteenth District Society. Dr. Fred Harrell, Olney, Pres.; Dr. Porter Brown, Medical Arts Bldg., Fort Worth, Secy.

Fourteenth District Society. Dr. J. Shirley Sweeney, Gainesville, Pres.; Dr. L. W. Johnston, 502 W. College St., Terrell, Secy.

Fifteenth District Society, Longview, October, 1949. Dr. P. A. Reitz, Pittsburg, Pres.; Dr. James E. Ball, Mount Pleasant, Secy.

CLINICS

Dallas Southern Clinical Society, Dallas, March 14-17, 1949. Miss Betty Elmer, Medical Arts Bldg., Dallas 1, Executive Secy.

International Post-Graduate Medical Assembly of Southwest Texas, San Antonio, 1950. Dr. John J. Hinchey, 643 Moore Bldg., San Antonio 5, Secy.

New Orleans Graduate Medical Assembly, New Orleans, March 7-10, 1949. Dr. Woodard D. Beacham, Room 105, 1430 Tulane Ave., New Orleans 12, Secy.

North Texas-Southern Oklahoma Fall Clinical Conference, Wichita Falls, Oct. 19, 1949. Dr. James T. Lee, Wichita Falls Clinic Hospital, Wichita Falls, Program Chairman.

Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 24-27, 1949. Muriel R. Waller, 512 Medical Arts Bldg., Oklahoma City 2, Executive Secy.

Post Graduate Medical Assembly of South Texas, Houston, Nov. 29-Dec. 1, 1949. Dr. E. Trowbridge Wolf, 229 Medical Arts Bldg., Houston, Secy.

TEXAS HEALTH COUNCIL ORGANIZED

Preliminary plans for the immediate organization of the Texas Health Council, a statewide association of the medical profession, allied groups, and lay organizations "having a common interest and a sincere desire to improve and expand medical care in Texas through a joint, concerted program based on a sound American policy," were completed by representatives of the various groups meeting in Dallas, March 13.

The Texas Health Council plan was proposed by the Board of Trustees and subsequently approved by the Executive Council of the State Medical Association. At that time Dr. George A. Schenewerk of Dallas, chairman of the Committee on Public Relations, was designated to prepare a prospectus and initiate preliminary arrangements with the other groups for the organization, which will be set up on a state, district, county, and local basis. Representatives of the several participating groups will constitute a planning committee until the organization is completed.

"The establishment of the Texas Health Council promises to be an important milestone in medical progress in Texas. Only through better understanding and closer cooperation with other groups and associations can our goal to provide improved and increased medical care be attained," Dr. Schenewerk declared.

Realizing that the best answer to socialized medicine is the wider distribution of medical care and that a united and intensified effort is imperative if this is to be achieved, every branch of the American system of free enterprise has been invited to participate in this joint effort.

Groups which have been invited to participate in the organization of the council are doctors of medicine and dentists and the auxiliaries of these groups; nurses and pharmacists; hospital, medical service, legal, insurance, public utility, bank, transportation, education, and rural organizations; the newspapers and radio; and the clergy.

Dr. Schenewerk pointed out that "The laymen who have joined forces with the medical groups of the state in the council have not only the interest of public health in common with the medical profession, they also realize that if medicine were successfully stifled by bureaucracy, the government would eventually attempt to envelop other fields of endeavor as has been the case in other countries. Therefore, the bringing to a successful end of the attempt at socialization of medicine will benefit all enterprises that are vigorously opposing the encroachment of government control and will defeat any attempt to foist soup-line medicine on the people of this country."

MEMBERS OF THE FIFTY-FIRST TEXAS LEGISLATURE

Names of Senators and Representatives in the Fifty-First Legislature of Texas are listed below by districts for the convenience of those who wish to contact them in connection with the current legislative program of the State Medical Association and of other groups interested in improving health conditions in the state.

SENATORS BY DISTRICTS

1.	Howard A. Carney	Atlanta
2.	Wardlow W. Lane	Center
3.	Ottis E. Lock	Zavalla
4.	W. R. Cousins, Jr.	Beaumont
5.	Mrs. Neveille H. Colson	Navasota
6.	James E. Taylor	Kerens
7.	Warren McDonald	Tyler
8.	A. M. Aikin, Jr.	Paris
9.	Charles R. Jones	Bonham
10.	G. C. Morris	Greenville
11.	Fred Red Harris	Dallas
12.	Crawford C. Martin	Hillsboro
13.	Kyle Vick	Waco
14.	William T. (Bill) Moore	Bryan
15.	Gus J. Strauss	Hallettsville
16.	Searcy Bracewell	Houston
17.	Jimmy Phillips	Angleton
18.	John J. Bell	Cuero
19.	R. A. Weinert	Seguin
20.	Carlos Ashley	Llano
21.	W. A. (Son) Shofner	Temple
22.	R. L. Proffer	Justin
23.	George Moffett	Chillicothe
24.	Pat Bullock	Colorado City
25.	Dorsey B. Hardeman	San Angelo
26.	Walter Tynan	San Antonio
27.	Rogers Kelley	Edinburg
28.	Keith F. Kelly	Fort Worth
29.	Hill D. Hudson	Pecos
30.	Kilmer B. Corbin	Lamesa
31.	Grady Hazlewood	Amarillo

REPRESENTATIVES BY DISTRICTS

1.	Jim T. Lindsey	Boston
2.	Cloyd D. Young	Linden
3f.	Newton W. McCann	Texarkana
4.	Surry Turner	Gilmer
5.	Walter Caven	Marshall
6f.	Cecil Storey	Longview
7.	O. A. Cassity, Jr.	Beckville
8.	Joe B. Fleming	Henderson
9.	James L. Norton, Jr.	Nacogdoches
10.	Milton Wilkinson	Patroon
11.	Paul S. Wilson	Geneva
12.	Raymond T. R. Tatum	Huntington
13.	Edward P. Hughes	Newton
14.	Bill Daniel	Liberty
15f.	Miller B. Walker	Beaumont
16.	Jack B. Brooks	Beaumont
	Otis Lee	Port Arthur
17f.	L. D. (Duke) Godard	Texas City
18.	Dudley W. Peterson	Galveston
19.	Bob Casey	Houston
	Jeff Woodruff	Pasadena
	Carleton Moore, Sr.	Houston
	J. M. Heflin	Houston
	William A. (Bill) Miller, Jr.	Houston
20.	James B. Pattison	Pattison
21.	Franklin Perry	Angleton
22.	Floyd G. Rust, Jr.	Wharton
23.	Fred Niemann	Yoakum
24.	Dr. J. A. Luedemann	Brenham
25.	C. S. McLellan	Eagle Lake
26.	James K. Presnal	College Station
27f.	G. P. Pearson, Jr.	Navasota
28.	James Marvin Windham	Livingston
29.	M. B. Etheredge, Jr.	Huntsville
30.	C. W. Woods	Crockett
31.	Jack K. Wisener	Wells
32.	Bill Wood	Tyler
33f.	Tom Whiteside	Tyler
34.	C. P. McKnight, Jr.	Quitman
35.	Alford H. Flanagan	Talco
36.	Phil Brooks	Bagwell
37.	George W. Watson	Paris
38f.	L. P. Caston	Leonard
39.	Claude H. McCorkle	Sulphur Springs
40.	Byron R. Tinsley	Greenville
41.	Ray Kirkpatrick	Trenton
42f.	William A. Swindell	Commerce
43.	Davis Clifton	Farmersville
44.	James T. Sparks	Sherman
	Joe D. Carter	Sherman
45f.	Captain J. A. Benton	Wylie
46.	C. C. Gardner	Gainesville
47.	Wayne W. Wagonseller	Fruitland
48.	L. C. Slimp, Jr.	Decatur
49.	Robert Hal Jackson	Denton
50.	John L. Crosthwait	Dallas
	W. O. Reed	Dallas
	Sam Hanna	Dallas
	George Parkhouse	Dallas
	Douglas E. Bergman	Dallas
51f.	Preston P. Mangum	Dallas
52.	Phillip L. Willis	Kaufman
53.	M. K. Thomas	Wills Point
54.	Jack Y. Hardee	Chandler
55.	John B. McDonald	Neches
56.	Jack C. Bryan	Buffalo
57.	Jerry A. Steward	Fairfield
58.	George O. Nokes, Jr.	Corsicana
59.	Andy M. James	Hillsboro
60f.	Jerry T. Stockard	Frost
61.	A. Robin Henderson	Groesbeck
62.	Frank C. Oltorf	Marlin
63.	Herman Yezak	Franklin
64.	H. F. Paschall	Milano
65f.	Henry G. Lehman	Giddings
66.	R. B. Spacek	Fayetteville
67.	Durwood Manford	Smiley
68.	Tom Cheatham	Cuero
69.	William S. Fly	Victoria
70.	Harvey Shell	Gregory
71.	O. E. Cannon	Corpus Christi
72.	Menton J. Murray	Harlingen
73.	Joe M. Kilgore	McAllen
74.	A. J. Vale	Rio Grande City
75.	Abraham Kazen, Jr.	Laredo
76.	J. F. Gray	Three Rivers
77.	Dolph Briscoe, Jr.	Uvalde
78.	W. A. Williamson	San Antonio
	Eugene C. Williams	San Antonio
	Jack F. Ridgeway	San Antonio
	Marshall O. Bell	San Antonio
	O. E. Latimer	San Antonio
79.	L. L. Holstein	Pandora
80.	H. A. Heideke	Seguin
81.	William George Richards	Lockhart
	Max C. Smith	San Marcos
82.	Pearce Johnson	Austin
	Johnnie B. Rogers	Austin
83.	Frank Svadlenak	Thrall
84f.	William R. Stump	Georgetown
85.	A. W. Moursund	Johnson City
86.	Callan Graham	Junction
87.	Tom H. Stovell	Alpine
88.	J. T. Rutherford	Odessa
89.	S. J. Isaacks	El Paso
	William S. Jameson	El Paso
90f.	Louis J. Ivey	El Paso
91.	R. E. (Peppy) Blount, Jr.	Big Spring
92.	W. H. Rampy	Winters
93.	Reuben Senterfitt	San Saba
94.	Sid Gregory	Gatesville
95.	Lamar Zivley	Temple
96f.	Frank B. McGregor	Waco
97.	Hiram Staton	Waco
	J. K. Aynesworth	Waco
98f.	Albert M. Jones	Valley Mills
99.	D. D. Gathings	Cleburne
100.	Mrs. Rae Files Still	Waxahachie
	Don A. Lewis	Midlothian
101.	Joe Pyle	Fort Worth
	W. H. (Bill) Abington	Fort Worth
	Doyle Willis	Fort Worth
	H. A. (Salty) Hull	Fort Worth
102f.	Joe Shannon	Fort Worth
103.	Floyd Bradshaw	Weatherford
104.	W. E. Heatly	DeLeon
105.	H. G. Perry	Stephenville
106.	T. M. Collie	Eastland
107f.	Billie M. Jobe	Putnam
108.	Jack Cox	Breckenridge
109.	J. W. (Bill) Loving	Graham
110.	Jimmy P. Horany	Archer City
111.	Deno A. Tufares	Wichita Falls
	Vernon McDaniel	Wichita Falls
112f.	Leslie King	Vernon
113.	Clyde Whiteside	Seymour
114.	John E. (Jack) Morrison	Chillicothe
115.	William B. Teague	Anson
116.	W. K. (Bill) Tippen	Abilene
117.	Hiram Childress	Sweetwater
118.	Sterling W. Williams	Snyder
119.	Preston E. Smith	Lubbock
120.	I. B. Holt	Olton
121.	A. J. Rogers	Childress
122.	Grainger W. McIlhany	Wheeler
123.	J. Blake Timmons	Amarillo
124.	William J. (Bill) Craig	Miami
125.	W. R. Chambers	May
126f.	Joe W. Gandy	Winnsboro
127.	Harry Whitworth	Smithville

TEXAS HOSPITAL ASSOCIATION CONVENTION

The twentieth annual convention of the Texas Hospital Association will be held in Galveston on April 19, 20, and 21. Headquarters for the convention will be on the Pleasure Pier.

Among the subjects to be covered are the public's view of the hospital and the relationship of the hospital, the patient, and the press. The present status of the Blue Cross plan and the question of responsibility for hospital care for indigent persons will be discussed, as will the question of what nursing service can be provided for the future. Organization, financing, and design of hospitals will be considered as well as problems in maintenance and management of small hospitals.

Dr. L. L. D. Tuttle, Houston, delegate of the State Medical Association to the convention, will speak the afternoon of April 21, and a report from the Hospital Survey and Construction Division of the Texas State Department of Health will also be given at that time.

Members of the State Medical Association are invited to participate in the meeting.

Texas Urological Society

The third annual meeting of the Texas State Urological Society was held in Temple at the Scott and White Clinic on February 7 with seventy-eight urologists attending.

During the luncheon business meeting the society voted to meet in Houston in 1950, the exact date to be announced later. New officers are Dr. Charles Simpson, Temple, president, and Dr. Tryon Robinson, Houston, secretary.

The physicians and their wives attended a buffet supper February 6, and Drs. Charles Simpson, Joe Killman, and E. O. Bradfield, Temple, sponsored an evening cocktail party and dinner at the Temple Country Club on February 7.

The scientific program was as follows:

Prostatic Surgery (Round-Table Discussion):
- Suprapubic—Dr. C. A. Hooks, Galveston. and Dr. J. R. Reagan, Wichita Falls.
- Perineal—Dr. Weems Turner, Houston, and Dr. Harry Spence, Dallas.
- Transurethral Resection—Dr. H. A. O'Brien, Dallas, and Dr. A. K. Doss, Fort Worth.
- Retropubic—Drs. Hub Isaacks, Fort Worth; Karl King, Dallas; and C. M. Simpson, Temple.

Sex Hormones and Cell Injury—C. M. Pomerat, Ph. D., Professor of Cytology, University of Texas Medical Branch, Galveston.

Pyelogram Clinic (Howard Hour)—Dr. T. Leon Howard, Denver.

TEXAS RADIOLOGICAL SOCIETY

The Texas Radiological Society met January 7-8 in Fort Worth for its thirty-sixth annual session. Physicians attending were given a supper at the Fort Worth Club by the Fort Worth radiologists the evening of January 7 and a cocktail party the evening of January 8.

New members elected at the business session include Drs. Marion W. Cole, Amarillo; Irvin Deutsch, Brownwood; Harry Fishbein, Houston; Cyrus P. Klein, Texarkana; A. G. M. Martin, III, McAllen; Oscar L. Morphis, Fort Worth; Herman C. Sehested, Fort Worth; Edgar W. Spackman, Fort Worth; Robert W. Surratt, Stephenville; Luther M. Vaughn, Houston; and Delphin von Briesen, El Paso.

Officers for next year are Drs. J. J. Faust, Tyler, president; W. V. Ramsey, Abilene, president-elect; J. R. Maxfield, Jr., Dallas, first vice-president; R. D. Moreton, Temple, second vice-president; R. P. O'Bannon, Fort Worth, secretary-treasurer; and R. T. Wilson, Austin, historian. New officers were installed at a banquet at which Dr. James F. Brailsford, Birmingham, England, spoke on "The Practice of Radiology in England."

The next meeting will be held in Dallas during January, 1950, the exact date to be set by the executive committee.

The following scientific program was presented:

JANUARY 7

Pulmonary Disease of Vascular Origin—Dr. L. G. Rigler, Minneapolis.

Examination of Esophagus, Stomach, and Duodenum with Particular Reference to Use of Spot Film and Photo-Electric Timing—Dr. F. E. Templeton, Seattle.

Roentgen Examination of Urinary Tract, Part I, Kidneys—Dr. C. L. Gillies, Iowa City.

Intervertebral Disk; Anatomic and Pathologic Changes Excluding Protrusion—Dr. H. P. Doub, Detroit.

Effects of Trauma on Bones and Joints—Dr. J. E. Brailsford, Birmingham, England.

Roentgen Examination of Urinary Tract, Part II, Ureters and Bladder—Dr. Gillies.

Contrast Myelography—Dr. Doub.

Osteochondritis and Avascular Necrosis of Bone—Dr. Brailsford.

Examination of Colon with Particular Reference to Method of Syphoning Off the Barium and Routine Studies with Injection of Air—Dr. Templeton.

JANUARY 8

Roentgen Diagnosis of Carcinoma of Lung—Dr. Rigler.

Notes on Differential Diagnosis of Various Lesions of Gastro-Intestinal Tract—Dr. Templeton.

Radiology Versus Biopsy in Diagnosis of Tumors of Bone—Dr. Brailsford.

Correlation of Roentgenologic and Clinical Findings of Sinus Disease—Dr. E. E. Seedorf, Temple.

Roentgen Examination of Urinary Tract, Part III, Urethra and Prostate—Dr. Gillies.

The Spine: Differential Diagnosis of Injuries and Arthritides—Dr. Doub.

Films (discussion and diagnosis)—Dr. Irvin Deutsch, Brownwood, and Dr. Jarrell Miller, Dallas.

BAYLOR TO COOPERATE WITH V. A. HOSPITAL

Four members of the Baylor University College of Medicine faculty have been appointed to a dean's committee, the purpose of which is to work with the staff of the hospital recently acquired in Houston by the Veterans Administration in maintaining medical standards and in providing residencies for doctors wishing to secure certification as specialists. The committee members are Dr. Warren T. Brown, chairman, associate dean and professor of psychiatry; Dr. James A. Greene, professor of medicine; Dr. Michael E. DeBakey, professor of surgery; and Dr. W. H. Moursund, dean of the college, who is an ex-officio member.

The Veterans Administration will assume full control of the 1,000 bed U. S. Naval Hospital when the Naval patients are transferred approximately April 15. Close cooperation is then planned between the hospital and Baylor University College of Medicine.

TEXAS STATE HEALTH EDUCATION COUNCIL

The Texas State Health Education Council was formally organized at a meeting January 7 in Austin, and Rhea H. Williams, Ed. D., Austin, director of athletics of the Interscholastic League, was elected president.

The purposes of the council are to encourage all state agencies to work together for a more concentrated effort in health education; to evaluate health education from the college, public school, and community levels; to set a pattern at the state level which exemplifies accomplishments through coordination and cooperation; and to insure that the services of all state agencies are known and available to all organizations and personnel interested in the furtherance of health.

Governor Beauford H. Jester; Senator Crawford C. Martin, Hillsboro; and Representative John B. Rogers, Austin, chairman of the legislative committee of the council, spoke to the group. Reports from the five college coordinators who are conducting experimental health programs in their communities were given.

Tom Rishworth, director of Radio House, University of Texas, discussed the experimental health quiz program that is being developed by the Travis County Health Council for broadcast each Thursday to the classrooms of twenty-four rural schools. It was brought out that from the point of view of the health education administrators, teachers, mothers, and pupils the program is helpful. The council voted to encourage the local production of this type of program in counties in which its agencies are functioning.

Dr. Ben M. Primer, Austin, is the official delegate of the State Medical Association to the council. Dr. Harold M. Williams, Austin, Secretary of the Association, and Dr. George W. Cox, state health officer, are among the consultants to the council.

UNIVERSITY OF TEXAS MEDICAL BRANCH

A grant of $4,000 from Hoffman-LaRoche, Inc., Nutley, N. J., to assist in supporting the studies of Eric Ogden, L.R.C.P., professor of physiology, University of Texas Medical Branch, on the influence of kidney factors in high blood pressure, has recently been made, according to Chauncey D. Leake, Ph.D., vice-president of the Medical Branch.

A grant to the Heart Station of John Sealy and Affiliated Hospitals, to support research in diuretics directed by Dr. Arthur Ruskin, associate professor of internal medicine at the Medical Branch, has been made by Campbell Products Laboratory, New York.

Dr. B. I. Burns, director of hospitals and professor of anatomy at the Medical Branch, has accepted appointment as director of municipal hospitals, Kansas City, Mo. Dr. Jack R. Ewalt, professor of neuropsychiatry, will succeed him as director of the hospitals in March.

The Gold Medal of the American Academy of Orthopedic Surgery has been awarded Drs. G. W. N. Eggers, professor of orthopedic surgery, and Thomas Shindler, resident in orthopedic surgery, and Charles M. Pomerat, Ph.D., director of the Tissue Culture Laboratory of the Medical Branch, for their exhibit showing the influence of pressure and contact on the healing of bone injury.

Cooperation between the College of Pharmacy of the University of Texas, Austin, and the Medical Branch of the University, Galveston, is being worked out between Henry N. Burlage, Ph. D., dean of the College of Pharmacy, and officials of the Medical Branch. According to the Galveston *Tribune,* pharmacy graduates may serve an internship at the John Sealy Hospital pharmacy in Galveston and the College of Pharmacy will carry on research in antibiotics jointly with the Medical Branch. Dean Burlage is also making plans to correlate studies at the University in Austin with such institutions as the M. D. Anderson Hospital for Cancer Research and the University of Texas School of Dentistry, Houston.

NATIONAL MEDICAL MEETINGS

National and regional meetings to be held soon include the following:

Southern Branch, American Public Health Association, Dallas, April 14-16.—Present trends in public health will be discussed and specific problems of interest to health officers, biologists, nutritionists, dentists, laboratory personnel, nurses, sanitary engineers, statisticians, and health educators will be considered. Drs. J. W. Bass and J. M. Pickard, Dallas, are in charge of local arrangements.

American College of Allergists, Chicago, April 14-17.—Papers will range from the most practical application of diagnosis and therapy in allergic diseases to investigative fields of great importance. There will be a panel discussion on pediatric allergy. Further information may be secured from Dr. Fred W. Wittich, Secretary, 423 LaSalle Medical Building, Minneapolis 2.

International and Fourth American Congress on Obstetrics and Gynecology, New York, May 14-19—Physiology of human reproduction; pathology of human reproduction; social and economic problems; neoplastic diseases of the female reproductive system; and obstetric and gynecologic procedures will be discussed. Inquiries pertaining to the meeting should be addressed to the Chairman, Dr. Fred L. Adair, 24 West Ohio Street, Chicago 10.

American Goiter Association, Madison, Wis., May 26-28.—Papers, dry clinics, and demonstrations will be held on goiter and other diseases of the thyroid gland. Further information may be obtained from Dr. T. C. Davison, 478 Peachtree Street, N. E., Atlanta.

International Congress on Rheumatic Diseases, New York, May 30-June 3.—This, the first such congress held in the United States, is an open meeting and physicians from many foreign countries are expected to attend. The official languages will be English, French, and Spanish, but instantaneous translations of the scientific papers given at the plenary sessions will be made by I.B.M. wireless system. Additional information may be secured from Dr. Richard H. Freyberg, President, American Rheumatism Association, 321 East 42nd Street, New York 17.

American College of Chest Physicians, Atlantic City, June 2-5.—Information may be obtained from Murray Kornfeld, Executive Secretary, 500 North Dearborn Street, Chicago 10.

Vascular Surgeons Society, Atlantic City, June 8-9.—For information write to Dr. Ross Veal, Secretary, 1801 Avenue K, Washington, D. C.

AMERICAN BOARD OF OPHTHALMOLOGY

The American Board of Ophthalmology announces that it does not evaluate, approve, or disapprove any ophthalmic residency toward fulfilling the requirements for candidates for board examinations. Any candidate qualifying for board examination and completing prerequisities outlined in the booklet of information will be accepted. A copy of this booklet may be obtained from the secretary of the board at 56 Ivie Road, Cape Cottage, Maine.

PERSONALS

Dr. Tinsley R. Harrison, Dallas, presented a paper on heart failure at the March 7-9 meeting of the American Academy of General Practice in Cincinnati.

Dr. Arthur Grollman, professor of medicine, Southwestern Medical College, Dallas, and *Wendell H. Griffith, Ph.D.,* professor of biochemistry and nutrition, University of Texas Medical Branch, Galveston, have been appointed to serve as consultant experts in Study Sections of the National Institutes of Health, Bethesda, Md.

Dr. Charles J. Koerth, recently medical director of the Gonzales Warm Springs Foundation, has been named assistant superintendent of the State Tuberculosis Sanatorium.

Dr. York Lancaster, San Marcos, and Miss Mary E. Dardeau were married December 4 in New Braunfels.

Dr. and Mrs. L. B. S. Richter, Yoakum; *Dr. and Mrs. J. J. Delaney,* Galveston; and *Dr. and Mrs. H. L. Kaplan,* Houston, are the parents of girls born recently, according to the *Alumni Pulletin* of the University of Texas Medical Branch.

Dr. and Mrs. L. A. Ehrhart, Boerne, are the parents of a son, Robert Henry, born December 11.

Dr. and Mrs. W. H. Siddon, Orange, are the parents of a daughter, Jane, born December 17.

Dr. and Mrs. R. D. Falkenstein, Pampa, are the parents of a son born December 29.

BOARD OF OBSTETRICS AND GYNECOLOGY

General oral and pathology examinations (Part II) will be conducted by the American Board of Obstetrics and Gynecology, Inc., at Chicago, May 8-14. Candidates for re-examination in Part II must make written application to the secretary's office not later than April 1. Applications are being received for the 1950 examinations, and forms and bulletins are sent upon request to the board at 1015 Highland Building, Pittsburgh 6.

EDUCATIONAL CAMPAIGN AGAINST ANTIVIVISECTION

A nationwide campaign to speed medical research through combating the bans erected by antivivisectionists will be spearheaded during March by the National Society for Medical Research, of which Dr. Anton J. Carlson is president. Ninety-nine national scientific and civic organizations are cooperating in the drive to explain that medical science depends upon the study of living creatures, and persons who oppose the study of life for the purpose of learning how to protect it may be defeating their own interests.

Those who support vast appropriations for medical research on one hand and oppose the work which is done with the money on the other hand, Dr. Carlson points out, need to have the issue clarified. Such groups as the American Medical Association, American Dental Association, American Red Cross, American Veterinary Medical Association, National Research Council, and the United States Junior Chamber of Commerce hope in the current educational effort to bring about a better understanding of the situation, which is now being brought before many state legislatures in bills proposing antivivisection measures.

Library Section

PACKAGE SERVICE

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 700 Guadalupe Street, Austin, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Packages are allowed to remain in the hands of the borrower for 14 days.

ACCESSIONS

The following additions were made to the Library during February:

Reprints received, 2,022.

Journals received, 277.

Books received, 16.

The Chest and the Heart, by Myers and McKinlay, and *Child Psychiatry,* by Kanner, from Charles C. Thomas Company, Springfield, Ill.

Social Medicine: Its Derivations and Objectives, by Goldston (editor), from the Commonwealth Fund, New York.

Clinical Case-Taking, by Herrmann, and *The Handbook of Diseases of the Skin,* by Sutton, from C. V. Mosby, St. Louis.

The Alcoholic Woman, by Karpman, from the Linacre Press, Washington, D. C.

Doctors of Infamy, the Story of the Nazi Medical Crimes, by Mitscherlich, from Harry Schuman Publishers, New York.

Critical Studies in Neurology, by Walshe; *Symptoms in Diagnosis,* by Meakins; *Fractures and Orthopoedic Surgery for Nurses and Masseuses,* by Naylor; *Atlas of Human Anatomy,* by Woerdman; and *The Pharmacologic Principles of Medical Practice,* by Krantz and Carr, from Williams and Wilkins Company, Baltimore.

Psychodynamics and the Allergic Patient, by Abramson, from Bruce Publishing Company, St. Paul.

Health Education, by Wilson, from the National Education Association of the U. S., Washington, D. C.

Council on Pharmacy and Chemistry, by the A.M.A., from the American Medical Association, Chicago.

An Elementary Atlas of Cardiography, by Jones and others, from John Wright & Sons, Bristol, and Simpkin Marshall, London.

SUMMARY OF SERVICE

Local users and visitors, 38.	Borrowers by mail, 69.
Items consulted, 487.	Packages mailed, 73.
Items borrowed, 208.	Items mailed, 566.

Total number of items consulted and loaned, 1,224.

MOTION PICTURE FILM LIBRARY

Motion picture films on medical subjects, 16 mm., both silent and sound, some in color, and suitable for either medical or lay audiences, are available for loan to county medical societies, hospital staffs, or individual physicians, on request. Borrowers will be required to pay only the cost of shipment of the films, by express, with insurance, and for any damage to films in the hands of the borrower.

Requests for films should be addressed to "Motion Picture Film Library, State Medical Association of Texas, 700 Guadalupe Street, Austin, Texas." A list of available films, with descriptions, will be furnished on request.

The following motion picture films were loaned by the Film Library during February:

Accident Services (British Information Services)—Alpha Epsilon Delta Premedical Society, Baylor University, Waco.

The Anemias (Lederle Laboratories, Inc.)—Nursing Class, Hotel Dieu Hospital, Beaumont, and the staff of Mother Frances Hospital, Tyler.

Anesthesia, Regional (Winthrop Chemical Co.)—Staff of Overall Memorial Hospital, Coleman, and staff of Medical Arts Hospital, Brownwood.

Anoxia, Physiology of (Linde Air Products)—Dr. William F. Powell, Gainesville.

Appendicitis in Childhood (Mead Johnson) — Bastrop County Medical Society, Bastrop.

As Others See Us (American Hospital Association)—University of Houston School of Nursing, Houston.

Back to Normal (British Information Services)—American Legion, Mineola.

Behind the Shadows (Texas Tuberculosis Association)—Harlandale Health and Physical Education Classes, Harlandale High Schools, San Antonio.

Bleeding Tendency, Methods for Determination of (Mead Johnson)—Scott and White Hospital School of Nursing, Temple.

Blood Transfusion (British Information Services)—Scott and White Hospital School of Nursing, Temple, and Har-

landale Health and Physical Education Classes, Harlandale High Schools, San Antonio.

Breech Extraction with Forceps (Mead Johnson)—Austin-Waller Counties Medical Society, Bellville.

Cervical Smear (Dr. Karl John Karnaky)—Taylor County District Society Medical Technologists; Hendrick Memorial Hospital, Abilene; Cooke County Medical Society, Gainesville; and Medical Staff of Methodist Hospital, Dallas.

Cesarean Section, Low Cervical (Mead Johnson)—Crosbyton Clinic-Hospital, Crosbyton, and Methodist Hospital School of Nursing, Houston.

Chest Disease, Surgery in (British Information Services)—Surgical Staff of Brackenridge Hospital, Austin.

Cholecystectomy (Mead Johnson)—Local Physicians, Midland.

Conquering Darkness (Dr. V. R. Hurst)—Harlandale Health and Physical Education Classes, Harlandale High Schools, San Antonio.

D.D.T., Story of (British Information Services)—Harlandale Health and Physical Education Classes, Harlandale High Schools, San Antonio.

Dysmenorrhea, Primary (Searle Laboratories)—Bastrop Clinic, Bastrop.

Eyes for Tomorrow (Dr. V. R. Hurst)—University of Houston School of Nursing, Houston, and American Legion, Mineola.

Folvite (Lederle Laboratories)—St. Vincent's Hospital Staff, Sherman.

From Moo to You (Borden Company)—Vernon Junior High School, Vernon, and Dr. C. W. Evans, Lufkin.

Gastrectomy, Safer (Billy Burke Production)—Nursing Class, Hotel Dieu Hospital, Beaumont, and Southern Pacific Hospital Staff, Houston.

Gastroscopy in Gastric Pathology (Harrower Laboratory, Inc.)—Bastrop Clinic, Bastrop.

Goiter Surgery (Mead Johnson)—Southern Pacific Hospital Staff, Houston.

Goodbye Mr. Germ (Texas Tuberculosis Association)—Vernon Junior High School, Vernon.

Heart Disease, Oxygen Therapy (Linde Air Products)—Dr. R. Wright, Lion's Club, New Braunfels, and Austin-Waller Counties Medical Society, Bellville.

Hematology, Animated (Armour and Company)—Scott and White Hospital School of Nursing, Temple; Memorial Hospital School of Nursing, Houston; and St. Vincent's Hospital Staff, Sherman.

Hepatitis, Observation on (Mead Johnson)—University of Houston School of Nursing, Houston.

Human Fertility (Ortho-Products)—Scott and White Hospital School of Nursing, Temple, and Van Zandt County Medical Society, Canton.

Human Sterility (Winthrop Chemical Co.)—Crosbyton Clinic-Hospital, Crosbyton.

Hypodermic Syringes and Needles (Becton, Dickinson & Co.)—University of Houston School of Nursing, Houston.

Hysterectomy (Mead Johnson)—Karnes-Wilson Counties Medical Society, Kenedy.

Injuries, Athletic Type (Becton, Dickinson & Co.)—Dr. J. H. Bohmfalk, San Antonio.

Lesions of Vulva, Vagina, and Cervix (Dr. Karl John Karnaky)—Dr. C. G. Goddard, Bastrop.

Meningioma, Removal with Cranioplasty (Dr. George Ehni)—Staff of Methodist Hospital, Dallas.

Nasal Sinusitis (E. Fougera & Co., Inc.)—Local Physicians, Midland.

Parkinsonism—Post-Encephalitic (Lederle Laboratories)—Brackenridge Hospital School of Nursing, Austin.

Pneumonia (Mead Johnson)—Dr. J. H. Bohmfalk, San Antonio.

Premature Infant, The Care of (Mead Johnson)—Staff of Mother Frances Hospital, Tyler.

Resuscitation of the Newborn (Mead Johnson)—Dr. C. G. Goddard, Bastrop.

Roentgen Pelvimetry (Mead Johnson)—Van Zandt County Medical Society, Canton.

Stitch in Time (American Medical Association)—Dr. N. D. Buie, Jr., Marlin.

Strictly Personal (War Department)—University of Houston School of Nursing, Houston.

Time Is Life (American Cancer Society)—Calliopian Club, Hereford.

Traitor Within (American Cancer Society)—Dr. C. W. Evans, Lufkin; Dr. N. D. Buie, Jr., Marlin; and Calliopian Club, Hereford.

Trichomonal and Monilial Vaginitis (Searle Laboratories)—Bastrop Clinic, Bastrop.

Trichomonas Vaginalis and Leukorrhea (Dr. Karl John Karnaky)—Hendrick Hospital Staff, Abilene.

Tuberculosis, Diagnostic Procedure in (Texas Tuberculosis Association)—Karnes-Wilson Counties Medical Society, Kenedy.

Varicose Veins and Their Complications (Becton, Dickinson & Co.)—Medical Arts Hospital, Brownwood, and Staff of Overall Memorial Hospital, Coleman.

BOOK NOTICES

[1] A Textbook of General Physiology

Philip H. Mitchell, M. D., Robert P. Brown Professor of Biology, Brown University. Fourth edition. Cloth, 927 pages. Price, $7.50. New York, Toronto, and London, McGraw-Hill Book Company, Inc., 1948.

This fourth edition of Dr. Mitchell's splendid book has been revised, especially in the subject matter dealing with excitation and contraction, the structure of lung matter, permeability of cells, and nutritive requirements. The reader will enjoy the newer material on biologic oxidation. The reviewer found the chapter on intermediary metabolism clearly and succinctly presented, and is of the opinion that medical practitioners will profit greatly by reading it. A highly successful effort has been made by the author to present the subject of physiology in a manner detailed enough for the close student, and sufficiently broad for the busy practitioner, to reaffirm the broad principles of physiologic knowledge needed for the application of scientific data in solving daily medical problems.

Dr. Mitchell's book will be a credit to the library of any discerning student of medical science.

[2] Clinical Laboratory Methods and Diagnosis, Vol. I, II, III

R. B. H. Gradwohl, M. D., D. Sc. Fourth edition, Cloth, 3148 pages. Price, $40. St. Louis, C. V. Mosby Company, 1948.

Now published in three volumes, this set is believed by the reviewer to represent the most extensive and authoritative reference in the field of clinical pathology. It is completely modernized by revision and additions on recent advances, and is a reference which should prove of great usefulness to pathologists and medical technologists.

[3] Chronic Ill-Health Relieved by Drainage of the Para-Nasal Sinuses

Rosa Ford, late Ophthalmic Surgeon to the South London Hospital for Women. Cloth, 104 pages. Price, $1.50. London, Henry Kimpton, 1948.

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[1] *Alvis E. Greer, M. D., Houston.*
[2] *Reviewed by C. T. Ashworth, M. D., Fort Worth.*
[3] *Jack D. Brownfield, M. D., Fort Worth.*

This volume of 104 pages is devoted to the value of treating infections of the sinuses, which, in the opinion of the author, is the cause of many conditions of obscure etiology. Abstracts of numerous cases which were improved by internal medication, sinus irrigation, and antrostomy are cited. Among these conditions are chronic headaches, migraine, chronic ill-health, retrobulbar neuritis, ptosis, strabismus, arachnoid membranes and cysts, episcleritis, keratitis, rheumatoid arthritis, disseminated sclerosis, coronary embolus, acne, dysmenorrhea, obesity, hay fever, and many others.

The author stresses the importance of diagnosis, and states that sinus infection may be present and of long standing, even in the face of a normal appearing nose, negative roentgenograms, and even negative findings from irrigations of the sinuses. Her main diagnostic points are a history of repeated upper respiratory infections and a contracted peripheral visual field to a 1 mm. object. While many of the conditions described by the author have long been attributed to chronic foci of infections in the sinuses and elsewhere, a large number of them at present are still classified in the realm of "wishful thinking."

[4] The Rh Factor

Joseph M. Hill, M. D., and William Dameshek, M. D., Editors of the Journal of Hematology. Cloth, 192 pages. Price, $4.25. New York, Grune and Stratton, 1948.

This interesting and rather monumental work is received with great interest. While not being exactly a primer on the subject, it is enlightening both from a clinical and didactic standpoint.

In the reviewer's opinion, this subject is both timely and well handled, and is a boon to every practitioner of medicine regardless of his field, whether it be limited or general.

[5] The Battle of the Conscience: A Psychiatric Study of the Inner Working of the Conscience

Edmund Bergler, M. D., Washington Institute of Medicine, Washington, D. C. Cloth, 296 pages. Price, $3.75. Baltimore, Monumental Printing Company, 1948.

This book is a psychoanalytic study of the unconscious conscience. It traces the development of the unconscious criterion of conduct from the infantile stage of sphincter training through the later teaching and example of our elders, and the distortions which we individually manage to incorporate.

This unconscious conscience is synonymous with the Super Ego which the author conceives as made up of two elements, the Ego Ideal, or the "Thou Shalt" element, and the Daimonion or the "Thou Shalt Not" element. There is a constant unrest and feeling of guilt within us because high ideals of accomplishment and perfection are held up before the far from perfect Ego by the Daimonion. The Ego Ideal is seen as a fiction set up by the infant to keep him from feeling utterly defeated by the domination and direction of elders. He takes their commands, making them his own inner rules, but, in doing so, he turns some aggression against his own ego, chiefly the aggression which had been directed against the parents.

The author believes that all persons have neurotic tendencies, but that the normal persons have more completely solved their infantile conflicts and can be more objective than their neurotic brothers.

An important distinction between normal conscience and neurotic conscience is that the former prevents criminal or immoral actions from the start. The latter works quite differently; it even lures the victims by a pseudo-optimism into actions which will bring about punishment or destruction of the perpetrator. The conscious element of the conscience is seen by the author as having a relatively small role in our lives.

Interesting theories, illustrated by graphic cases, are presented on a wide variety of neurotic behavior. The book manifests rich and ingenious thinking such as is usually encountered in psychoanalytic studies. The vocabulary is not too fearsome, and the book is for the most part easily read. It succeeds in freshening our appreciation of the extremely subtle and involved operation of the unconscious.

[6] A Course in Practical Therapeutics

Martin Emil Rebfuss, M. D., F.A.C.P., F. Kenneth Albrecht, M. D., and Alison Howe Price, A. B., M. D. Cloth, 824 pages. Price $15. Baltimore, Williams and Wilkins Company, 1948.

The title of this book is accurately descriptive of its contents, because the therapeutic suggestions are practical and "common sense." This eight-hundred page volume is a handy quick reference for use in diagnosis, as well as for treatment. It contains many easy-to-read charts, outlines, and diagrams.

The book is divided into four sections. The best written portion is in section three, in which the latest treatment of specific disorders is given in detail. The discussion of therapy of the infectious diseases requires one hundred pages of carefully outlined details. The treatment suggested for the various encephalitides is comprehensive and should be helpful to the practitioner having difficulty with the differential diagnosis of the meningitides and encephalitides.

Radioactive isotopes in medicine, radiation therapy, psychotherapy, and other special therapeutic methods are considered in the last section of the book. Of particular interest were the authors' suggestions on pediatric treatment principles. Infant feeding, parenteral administration of fluids, amounts and technique for blood transfusions, and pediatric formulary are discussed in a readily understandable manner.

[7] Principles Governing Eye Operating Room Procedures

Emma I. Clevenger, R. N., Supervisor Eye Operating Room, New York Eye and Ear Infirmary. Cloth, 215 pages. Price, $5.50. St. Louis, C. V. Mosby Company, 1948.

This is a valuable book for every ophthalmic surgeon upon whom rests the responsibility for the instruction of personnel in the preparation of the armamentarium and operating room for eye surgery in a general hospital. The author's long experience in an unusually busy eye operating room makes this manual an authoritative guide.

The first part is devoted to prerequisites for an efficient eye operating room nurse, a glossary of eye terms, an enumeration and illustration of eye instruments, care and handling of eye instruments, electrical equipment, hypodermic needles and syringes, sutures, dressings, drugs and solutions, gross equipment, gloves, linen, application of aseptic principles, routine duties of the nurses and interns, and the preparation of the patient.

The second part covers the arrangement of supply tables and the suture and instrument tables.

The third part is devoted to the instrument trays and sutures for each individual operation, including photographs and variation of the instruments used by the different ophthalmic surgeons of the New York Eye and Ear Infirmary of New York City.

[4] *W. N. Jenkins, M. D., Fort Worth.*
[5] *James P. Malloy, M. D., Houston.*
[6] *Landria C. Smith, M. D., Plainview.*
[7] *John W. Eschenbrenner, B. S., M. D., F.A.C.S., Fort Worth.*

[8] **Outline of Physiology**

William R. Amberson, Ph.D., and Dietrich C. Smith, Ph.D. Second edition. Cloth, 502 pages, illustrated. Price, $5. Baltimore, Williams and Wilkins Company, 1948.

The authors of this book have prepared an excellent text covering basic physiology. It is well organized, contains adequate historical information to give a good background of the subjects under consideration, and is written in such a manner as to hold the reader's interest. Much of the information deals with some of the more recent advances in biochemistry and neurophysiologic investigations. The illustrations are excellent. The book lives up to its title as an outline and, in addition, presents invaluable information and explanation which should make highly desirable its use as a textbook in college, for nursing students, or for medical technicians.

[9] **Handbook of Ophthalmology**

Everett L. Goar, A. B., M. D., F.A.C.S., Professor of Ophthalmology, Baylor University College of Medicine, Houston, Texas. Cloth, 166 pages. Price, $5.50. St. Louis, C. V. Mosby Company, 1948.

Originally presented as a series of lectures to the students of Baylor University College of Medicine, Dr. Goar has recently published, in clear and concise language, the cardinal principles of ophthalmology. As stated by the author in the preface, it is not intended that this should do more than provide a working knowledge, and the reader is referred to more voluminous works for detailed information.

Beginning with a history of ophthalmology, the author takes up in succeeding chapters the anatomy, embryology, and physiology of the eye and its adnexa. The most modern methods of examining the eye are discussed, together with a chapter on refraction and lenses.

Without becoming too technical, and in language readily understandable, the many pathologic conditions are outlined in orderly manner and their treatment is discussed. Of particular interest to the general practitioner should be the chapter devoted to the ocular manifestations in general disease. Dr. Goar emphasizes the importance of routine fundus examinations in establishing a diagnosis and following the course of the disease.

This book should be in the library of everyone practicing medicine today. Not only does it give a working knowledge of ophthalmology to those outside the specialty, but it affords to the specialist a handy reference book in condensed form.

[10] **Subacute Bacterial Endocarditis**

Emanuel Libman, M. D., and Charles K. Friedberg, M. D. Cloth, 347 pages. Price, $3.50. New York, Oxford University Press, 1948.

This book is a bound portion of "Oxford Loose-leaf Medicine." The original edition was written by the late Dr. Emanuel Libman, truly an authority on subacute bacterial endocarditis. This edition is revised by the co-author, Dr. Charles K. Friedberg, to keep abreast with rapid advancement in the treatment of a heretofore fatal disease.

The book is precise in every detail. The main headings are clearly outlined and each is subdivided so that the book can be used for quick reference. The subdivisions do not detract from the use of the volume for a detailed authority on the disease. The so-called "bacteria free stage" of subacute bacterial endocarditis is gone into thoroughly. The prognosis of this disease is reviewed and the treatment is discussed in detail. The volume is written with the expectation that blood cultures and bacterial sensitivity tests to penicillin will be available, but the author also discusses the care of the case where these facilities are not available.

The only criticism the reviewer has is in the statement that streptomycin like penicillin has low toxicity for man. This volume was probably written before it was learned that eighth nerve damage or nitrogen retention may occur from the use of streptomycin.

This is an instructive and comprehensive book, and is recommended to the internist and to all doctors interested in this subject.

[8] *Edgar L. Etier, M. D., Fort Worth.*
[9] *S. F. Harrington, M. D., Dallas.*
[10] *Louian C. Carter, M. D., Port Arthur.*

Organization Section

AMERICAN MEDICAL ASSOCIATION

COMMITTEE ON RURAL HEALTH ADOPTS RESOLUTIONS

A comprehensive program to bring a high standard of health and medical care to rural communities has been adopted by the Committee on Rural Health of the American Medical Association. Announcement of the resolution was made following the National Conference on Rural Health in Chicago, February 4-5, sponsored by the A.M.A. committee and attended by more than six hundred leaders from various farm and health organizations.

The program provides for the following:

"1. State and public health services for general community hygiene and communicable disease control; public health nursing; well-baby conferences and clinics.

"2. The Hill-Burton Hospital Construction Act operating where the people of a community demonstrate sufficient desire for such facilities.

"3. Medical scholarships provided by medical associations, farm bureaus and through legislative appropriations to be given to deserving boys and girls, without discrimination, for medical and nurses education where they agree to practice for a time in rural areas.

"4. Agricultural school extension services where they utilize their home demonstration courses, 4-H clubs, health specialists whose special duty it is to organize health councils in the counties for the purpose of health education and where appropriate to apply for Hill-Burton facilities; the teaching of better farm methods, better soil conservation and soil building practices, better grain and productive livestock methods such as calf and pig clubs, five-acre club lots, better cost accounting and business methods.

"5. Parent-Teacher Associations where they encourage school children examination for hearing, sight, heart, hernia, immunization, school hygiene, as well as physical education.

"6. Special health groups such as tuberculosis, polio, cancer, heart, which do considerable educating within narrow limits.

"7. The application of voluntary prepaid medical and hospital care plans to rural communities, taking into consideration that several of the large farm groups have their own indemnity prepaid medical and hospital plans.

"8. A promotion of state and county health councils, the medical profession acting cooperatively with organized farm groups and other civic, church, and school organizations and special health groups for the purpose of health education and health activities of local character.

"9. A plan to bring the medically indigent, or low income, farmer into voluntary prepaid medical plans, which may involve some state financial aid.

"10. Use of the health education programs of farm groups.

"11. Encouragement of the civilian population, as distinguished from governmental official action, to help itself."

In announcing the action of the Committee on Rural Health, its chairman, Dr. F. S. Crockett, Lafayette, Ind., pointed out that all of the elements needed to bring high standards of health to rural communities are now functioning, but that they need to be channeled through community organizations such as health councils with medical guidance.

The general theme of the Conference on Rural Health was the environment of the farm, which was studied through such factors as farm hygiene, farm sanitation, nutrition of farm families, farm hazards, health care in rural towns, and the establishment and activities of rural health councils.

PROGRAM FOR ADVANCEMENT OF MEDICINE AND PUBLIC HEALTH

The expanded program for the advancement of medicine and public health developed by the American Medical Association is outlined below. Comments concerning the program appear in the editorial section of this JOURNAL. The program is as follows:

"1. Creation of a Federal Department of Health of Cabinet status with a Secretary who is a Doctor of Medicine, and the coordination and integration of all Federal health activities under this Department, except for the military activities of the medical services of the armed forces.

"2. Promotion of medical research through a National Science Foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.

"3. Further development and wider coverage by voluntary hospital and medical care plans to meet the costs of illness, with extension as rapidly as possible into rural areas. Aid through the states to the indigent and medically indigent by the utilization of voluntary hospital and medical care plans with local administration and local determination of needs.

"4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.

"5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas in which the need can be shown and with local administration and control as provided by the National Hospital Survey and Construction Act or by suitable private agencies.

"6. Establishment of local public health units and services and incorporation in health centers and local public health units of such services as communicable disease control, vital statistics, environmental sanitation, control of venereal diseases, maternal and child hygiene and public health laboratory services. Remuneration of health officials commensurate with their responsibility.

"7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.

"8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.

"9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.

"10. Integration of veterans' medical care and hospital facilities with other medical care and hospital programs and with the maintenance of high standards of medical care, including care of the veteran in his own community by a physician of his own choice.

"11. Greater emphasis on the program of industrial medicine, with increased safeguards against industrial hazards and prevention of accidents occurring on the highway, home and on the farm.

"12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care."

STATE MEDICAL ASSOCIATION

THREE NEW SOCIETIES TO MEET DURING ANNUAL SESSION PERIOD

Three new related organizations will meet in conjunction with the annual session of the State Medical Association in San Antonio in May. The Texas Air-Medics Association, the Texas Academy of General Practice, and the Texas Rheumatism Association will hold initial scientific programs immediately preceding the annual session. In addition, nine organizations which have previously met with the State Medical Association have also scheduled programs for the San Antonio session.

The Texas Air-Medics Association, a nonprofit society for the advancement of aviation medicine which was organized approximately a year ago, will be the guest of the Randolph School of Research Aviation Medicine on Sunday, May 1, for luncheon, an air show of jet-propelled and other aircraft in action, a scientific program, motion pictures, and an inspection tour of the school. General Harry Armstrong, commandant of the school, has authorized Dr. T. J. Cross, Fort Worth, president of the Texas Air-Medics Association, to invite all members of the State Medical Association and their families to participate in the program and entertainment. Those who expect to accept the invitation are requested to notify the secretary of the Air-Medics Association, Dr. C. F. Miller, Box 1393, Waco, how many will be in their party. The Air-Medics will also have a scientific and business session on Monday, May 2.

Organization of the Texas Academy of General Practice with Dr. J. B. Copeland, San Antonio, as president was accomplished during the period of the 1948 annual session of the State Medical Association, but the first scientific program of the chapter will be held Monday, May 2, in San Antonio, preceding the 1949 annual session. An afternoon and evening meeting will feature talks by Dr. Tate Miller, Dallas, President of the State Medical Association, and Dr. W. L. Pressly, Due West, S. C., recent recipient of the General Practitioner Award of the American Medical Association.

Several outstanding speakers from out of the state will participate in the program of the Texas Rheumatism Asso-

ciation in San Antonio on Monday, May 2. Among them are Drs. James O. Finney, Gadsden, Ala.; W. Paul Holbrook, Tucson, Ariz.; William K. Ishmael, Oklahoma City; and Paul R. Lipscomb, Rochester, Minn. This first scientific program of the Texas Rheumatism Association, an affiliate of the American Rheumatism Association, will include a variety of subjects of concern to internists, orthopedic surgeons, and general practitioners interested in arthritis and allied diseases, according to Dr. Howard C. Coggeshall, Dallas, president. An all-day program including a round-table luncheon with the Texas Orthopedic Association has been arranged. Inquiries should be addressed to Dr. Robert P. Thomas, Jr., third vice-president, 1002 Nix Professional Building, San Antonio.

Detailed programs of the three organizations mentioned, all of which have been approved by the Council on Scientific Work for meeting in conjunction with the State Medical Association, will appear with the program of the latter organization in the April issue of the JOURNAL. That issue will also carry details of the meetings of the Texas Society of Anesthesiologists, Texas Chapter of the American College of Chest Physicians, Texas Dermatological Society, Texas Neuropsychiatric Association, Texas Orthopedic Association, Texas Railway and Traumatic Surgical Association, Texas Society of Gastroenterologists and Proctologists, and Texas Heart Association, and of the Conference of City and County Health Officers.

Two revisions in the list of guest speakers for the State Medical Association program May 3-5 have been necessitated since announcement of the speakers in the February issue. Dr. Cecil Striker, Cincinnati, has accepted an invitation to be one of two guests for the Section on Medicine. Dr. Willis E. Brown, Iowa City, will be the guest of the Section on Obstetrics and Gynecology, replacing Dr. Herbert F. Traut, San Francisco, who will be unable to attend the annual session because of illness.

REVISED CONSTITUTION AND BY-LAWS READY

A limited supply of copies of the Constitution and By-Laws of the State Medical Association of Texas as revised by the House of Delegates in April, 1948, is now available at the central office of the Association. An effort is being made to fill all requests, but because the first printing was not large, persons needing the Constitution have been asked by the Secretary, Dr. Harold M. Williams, to be conservative in their requests and to preserve their copies for future reference.

It is anticipated that minor revisions will be necessary and an index is to be prepared before a large supply of the new Constitution and By-Laws will be printed.

Material for Association History Wanted

Plans are under way for the preparation of a history of the State Medical Association in the hope that such a history can be completed by 1953, the year which marks the centenary of the founding of the Association. A special committee to compile information for the history was recently appointed by the Board of Trustees. Dr. P. I. Nixon, San Antonio, is chairman, with Dr. W. B. Russ, San Antonio, and Dr. L. H. Reeves, Fort Worth, as members.

Dr. Nixon points out that some years ago the Association in cooperation with the archivist of the University of Texas collected considerable material pertinent to the Association's history, and these and other records in the central office will be valuable as the committee pursues its task. However, Dr. Nixon has requested that anyone who has material which he thinks would be helpful, notify him or the central office staff, which will assist the committee.

COUNTY SOCIETIES

Angelina County Society

January 11, 1949

(Reported by W. D. Thames, Jr., Secretary)

Treatment of Heart Disease—Alvis Greer, Houston.

Sixteen members, their wives, and five guests attended the January 11 banquet meeting of Angelina County Medical Society in Lufkin in honor of the new officers. J. H. Wade, Lufkin, president, introduced the other new officers.

Alvis Greer, guest speaker from Houston, spoke on the subject named above.

Brazoria County Society

January 27, 1949

(Reported by W. D. Nicholson, Secretary)

Modern Treatment of Burns—T. G. Blocker, Galveston.

Brazoria County Medical Society met January 27 in Angleton and heard T. G. Blocker, University of Texas Medical Branch, Galveston, speak on the subject named above.

James Wooten, Columbus, councilor for the Eighth District, requested discussion relative to endorsing a Veteran's Care Plan and the society agreed to support a plan similar to that of Michigan with participation being left to the individual physician.

A report on bills before the legislature was made by Ralph Gray, Lake Jackson, who said the State Medical Association is working for passage of a single bill, the Minimum Standards bill.

Collin County Society

January 10, 1949

Practical Evaluation of New Drugs—Andres Goth, Dallas.

Members of Collin County Medical Society met January 10 in McKinney and heard Andres Goth, professor of pharmacology, Southwestern Medical College, Dallas, speak on the subject named. He discussed the use of three groups of new drugs, the antibiotics, analgesics and narcotics, and sympathicolytics.

February 14, 1949

Recent Advances in Hematology as Applied to Blood Groupings, Transfusions and Hemolytic Transfusion Reactions—Ernest Muirhead, Dallas.

Members of Collin County Medical Society, meeting February 14 in McKinney, heard Ernest Muirhead, professor of pathology, Southwestern Medical College, Dallas, discuss the characteristics of the various factors in the ABO and CDE or Rh systems. The significance of the antibody determination tests, particularly the Coomb's test, was discussed and emphasized.

Colorado-Fayette Counties Society

January 25, 1949

(Reported by C. I. Shult, Secretary)

Nontraumatic Separation of Upper Femoral Epiphysis (roentgen-ray films)—Leo J. Peters, Schulenberg.

Colorado-Fayette Counties Medical Society met January 25 in Schulenberg with thirteen members present. Members of the auxiliary were dinner guests. Leo J. Peters, Schulenberg, spoke on the subject named above and showed roentgen-ray films.

Willis Youens, Weimar, moved that the society go on record against holding the 1949 meeting of the Eighth, Ninth, and Tenth Districts Medical Society. The motion was seconded by James H. Wooten, Columbus, and passed.

New officers include Leslie Boelsche, LaGrange, president; F. W. B. Rockett, Flatonia, vice-president; J. R. Laughlin, Eagle Lake, secretary-treasurer; Dr. Boelsche, Dr. Peters,

and C. I. Shult, Columbus, censors; Dr. Peters, delegate; and Dr. Youens, alternate.

Cooke County Society

January, 1949

(Reported by William F. Powell, Secretary)

Ocular Changes in Hypertensive Cardiovascular Disease—Lester Quinn, Dallas.

Members of Cooke County Medical Society and their wives were the guests of Charles K. Mills at a dinner given at his home in Gainesville in January. Lester Quinn, Dallas, discussed the subject named above.

J. Shirley Sweeney, Gainesville, became a member by transfer from Dallas County Medical Society. Vincent C. Cirone, Gainesville, was appointed to represent the society on the Civic Planning Council of Gainesville.

Dallam-Hartley-Sherman-Moore Counties Society

January 6, 1949

Tuberculosis—Miss Rita K. Murphy, Austin.

Dallam-Hartley-Sherman-Moore Counties Medical Society elected officers at a meeting January 6 in Stratford. Those who will serve are O. J. Richardson, Dumas, president; H. Pearson, Stratford, vice-president; and W. V. Coventry, Dumas, secretary.

Miss Rita K. Murphy, field consultant for the Texas Tuberculosis Association, Austin, who is organizing local committees in an attempt to stamp out tuberculosis, spoke to the group.

Dallas County Society

January 13, 1949

(Reported by W. W. Fowler, Secretary)

Paradise Unlimited: Menace of the Police State—Marjorie Shearon, Ph. D., Washington, D. C.

The annual dinner and business meeting of Dallas County Medical Society on January 13 featured an address by Marjorie Shearon, Ph. D., Washington, D. C., editor of a weekly medical newsletter, "American Medicine and the Political Scene." Dr. Shearon was formerly a Senate consultant and is regarded as an expert on medical legislation.

Installation of new officers, including George A. Schenewerk as president; Elliott Mendenhall as president-elect; Edwin L. Rippy as vice-president; and W. W. Fowler as secretary-treasurer, also highlighted the meeting. John G. Young, retiring chairman of the executive council, presided and read the report of the council for 1948. Edward White, the retiring president, spoke briefly.

Among State Medical Association officers who were present were Tate Miller, Dallas, President; G. V. Brindley, Temple, President-Elect; R. E. Windham, San Angelo, Vice-President; T. H. Thomason, Fort Worth, Treasurer; T. C. Terrell, Fort Worth, chairman, and F. J. L. Blasingame, Wharton, and Merton M. Minter, San Antonio, members of the Board of Trustees.

Dr. Miller introduced the speaker, and Dr. Mendenhall gave the invocation.

January 27, 1949

(Reported by W. W. Fowler, Secretary)

An Evaluation of Gastroscopy—Cecil O. Patterson, Dallas.
Diabetes in Pregnancy—Oran V. Prejean, Dallas.
Results of Operation During Pregnancy—William F. McLean.

Dallas County Medical Society met January 27 and elected seven physicians to membership while eleven transferring physicians were accepted. Boliver C. Andrews, Walter Faugh Pickett, Leonard R. Anderson, and Julian H. Morris were nominated for honorary membership in the State Medical Association.

J. Howard Shane, president of the Dallas County Medical Plan, conducted a brief general meeting of that group. G. E. Brereton then introduced a resolution pledging the support of Dallas physicians in working out the suggested expansion of the University of Texas medical education program and the incorporation of Southwestern Medical College with a North Texas Branch of the University.

The scientific program outlined was presented.

Ector-Midland-Martin-Howard-Andrews-Glasscock Counties Society

January 20, 1949

(Reported by Nell W. Sanders, Secretary)

Review of 500 Consecutive Cases of Biliary Tract Surgery—A. W. Bronwell, Lubbock.

Thirty-six members were present at the January 20 meeting of Ector - Midland - Martin-Howard-Andrews-Glasscock Counties Medical Society in Midland. The program outlined above was presented, followed by an open forum. The cases reported by Dr. Bronwell were from the practice of his associate, Dr. J. T. Krueger, who was unable because of illness to present the material himself.

R. B. G. Cowper, Big Spring, councilor for the Second District, suggested that the society adopt by-laws and a committee was appointed to work them up. W. G. Whitehouse, Midland, moved and the society approved the motion that each member be assessed $10 and the money be used locally to combat socialized medicine legislation now pending. Committees were appointed to handle local radio and newspaper publicity respecting such legislation.

Harrison County Society

(Reported by H. O. Padgett, Secretary)

Harrison County Medical Society met recently and elected the following officers: John E. Hill, president; A. J. Phillips, vice-president; H. O. Padgett, secretary; and Frank V. Mondrick, delegate. All of the officers reside in Marshall.

Hopkins-Franklin Counties Society

(Reported by Omer F. Kirkpatrick, Secretary)

Hopkins-Franklin Counties Medical Society met recently and elected officers for 1949. They are Joseph B. Longino, president; Stephen B. Longino, vice-president; Omer F. Kirkpatrick, secretary-treasurer; Thomas H. Stevens, A. B. Worsham, and Joseph Longino, censors; J. M. Fleming, Mt. Vernon, delegate; and Earl Stirling, alternate. All of the officers except Dr. Fleming reside in Sulphur Springs.

Kerr-Kendall-Gillespie-Bandera Counties Society

January 10, 1949

Recognition and Treatment of Blood Vessel Diseases—Albert W. Hartman, San Antonio.

New officers were elected at the January 10 meeting of Kerr-Kendall-Gillespie-Bandera Counties Medical Society in Kerrville. Choice B. Matthews, Kerrville, was named president; Dor W. Brown, Jr., Fredericksburg, vice-president; Roger Stevenson, Kerrville, secretary-treasurer; D. R. Knapp, Kerrville, delegate; and L. W. Feller, Fredericksburg, alternate.

Albert W. Hartman, San Antonio, spoke on the subject named with particular reference to treatment of chronic swollen legs. Ralph Letterer, San Antonio, and T. S. Gregg, formerly of Calumet, Mich., were guests.

Lamar County Society

January 6, 1949

(Reported by Thomas E. Hunt, Jr., Secretary)

Urologic Case Reports—George S. Woodfin, Paris.
Pediatric Case Report—C. E. Gilmore, Paris.

Nineteen members were present at the January 6 meeting of Lamar County Medical Society. Following dinner George

S. Woodfin presented three urologic cases and C. E. Gilmore followed with a pediatric case.

Lavaca County Society

(Reported by James W. Boyle, Jr., Secretary)

Lavaca County Medical Society elected officers at a recent meeting. Those who will serve are Robert W. Williams, Shiner, president; Hugo J. Strieder, Moulton, vice-president; James W. Boyle, Jr., Shiner, secretary-treasurer; C. T. Dufner, Hallettsville, Emil H. Marek, Yoakum, and Frank M. Wagner, Shiner, censors; Dr. Boyle, delegate; and Dr. Dufner, alternate.

Lubbock-Crosby Counties Society

January 4, 1949

(Reported by M. D. Watkins, Secretary)

Thirty members and guests attended the meeting of Lubbock-Crosby Counties Medical Society on January 4 in Lubbock.

Orville B. Hull and Frank C. Goodwin were elected to membership and Wallace I. Hess and Alvin W. Bronwell joined by transfer. Emphasis was placed on securing replacements of blood in the Red Cross Blood Bank, and it was announced that the city council had requested the society to put its resolutions regarding the city-county health plan into a detailed outline program to be presented to the city commission.

The secretary was instructed by the society to write to the United States Congressmen from Texas asking active opposition to socialized medicine legislation.

Reports on Lubbock health units, the Tuberculosis Association, Well Baby Clinic, Blood Bank, Cerebral Palsy Center, and Student Health Center at Texas Technological College were given, and it was agreed to give publicity to these groups, whose efforts are endorsed by the society.

Pecos-Jeff Davis-Presidio-Brewster Counties Society

February 1, 1949

(Reported by W. E. Lockhart, Secretary)

Eight members were present at the February 1 meeting of Pecos-Jeff Davis-Presidio-Brewster Counties Medical Society in Alpine. Frank Thompson was elected to membership.

Two films, "Passport to Health" and "Sulfathalidine in Ulcerative Colitis," were shown, by courtesy of Sharp and Dohme.

Randall-Deaf Smith-Parmer-Castro-Oldham Counties Society

January 5, 1949

(Reported by Leta N. Boswell, Secretary)

Low Back Pain (slides)—P. M. Girard, Dallas.

Randall-Deaf Smith-Parmer-Castro-Oldham Counties Medical Society met January 5 in Hereford with seventeen members and guests present.

A letter from George W. Cox, State Health Officer, concerning establishment of a health unit in Deaf Smith County to aid in care of migrant workers, which had been requested by the Chamber of Commerce in Hereford, was read, and R. P. Jarrett, Canyon, moved that establishment be approved if it was agreeable with the members in Deaf Smith County. The motion passed.

P. M. Girard, Dallas, gave an illustrated lecture on low back pain and answered questions of members, after which refreshments were served.

Tarrant County Society

January 4, 1949

(Reported by W. P. Higgins, Jr., Secretary)

Report on Recommendation of the Sixth Decennial International Revision Convention—D. A. Reekie, Fort Worth.
Discussion—Truman C. Terrell, Fort Worth.
Recent Observations on Tuberculin Tests in Consolidated Schools in Tarrant County—Carl F. Jordan, Fort Worth.
Discussion—W. G. Phillips, Truman C. Terrell, and M. C. Archer, Fort Worth.

The program outlined was presented when fifty-four members of Tarrant County Medical Society and one visitor met in Fort Worth on January 4.

D. E. Allen, W. E. Chilton, Frank Beall, Charles H. Harris, Earl Harris, C. F. Hayes, John J. O'Reilly, R. L. C. Rogers, and R. F. Saunders, all of Fort Worth, were nominated for honorary membership in the State Medical Association upon motion by W. G. Phillips, seconded by T. H. Thomason.

Carl F. Jordon, Frank S. McKee, and Clayton D. Taylor were elected to membership upon application.

Bob Barker was elected to the board of censors to fill the vacancy created by the resignation of Theron H. Funk.

January 18, 1949

(Reported by W. P. Higgins, Jr., Secretary)

Malignancies of the Eyelids—Hal W. Maxwell, Fort Worth.
Discussion—Burgess Sealy, Fort Worth.
Treatment of Myocardial Infarction—James K. Norman, Fort Worth.
Discussion—Cyrus L. Worrall, Fort Worth.

Tarrant County Medical Society met January 18, and the program outlined above was presented.

Mr. J. A. Gooch, chairman of the fund raising campaign for the American Heart Association in Fort Worth, explained the purposes of the drive and operation of the fund. James K. Norman moved, seconded by B. C. Ball, that the program be endorsed by the society.

Jack K. Leverett and James W. Short were elected to membership. Tribute was paid to Mrs. Joel Hulsey, mother of Sim Hulsey, who died January 13.

A resolution to the effect that members should not only vote against the program of compulsory health insurance but also use their influence against any member of either house of Congress voting for it was presented by Cyrus L. Worrall. It was seconded by Keith Barnes and carried. T. C. Terrell stated that each doctor should write to the representatives and senators and Tom Bond said each doctor should ask patients and their acquaintances to write letters to Congress.

Tom Green-Eight County Society

January 3, 1949

(Reported by M. D. Knight, Secretary)

New Developments in Gynecology and Obstetrics—John D. Weaver, Austin.
Discussion—J. A. Bunyard, Lloyd R. Hershberger, C. A. Kunath, and J. H. Smith, San Angelo.

A general discussion of new developments in the field of gynecology and obstetrics was presented by John D. Weaver, Austin, at the January 3 meeting of Tom Green-Eight County Medical Society in San Angelo.

G. W. Nibling, San Angelo, was unanimously elected to honorary membership in the society upon motion of C. A. Kunath, seconded by J. H. Smith, and he was nominated for honorary membership in the State Medical Association.

Joe D. Heath, A. E. Landy, and Charles F. Engelking were elected to membership.

Harvey M. Williams reported that radio programs on health are being presented over the local station weekly.

Travis County Society

January 11, 1949

(Reported by M. Allen Forbes, Secretary)

Foreign Bodies in Food and Air Passages (slides)—Oliver W. Suehs, Austin.

A report on 100 cases in which foreign particles had been removed from the food and air passages, illustrated by slides showing features of interest in diagnosis and in damage resulting from delay in removal of such objects, was presented by Oliver W. Suehs, Austin, at the January 11 meeting in Austin of Travis County Medical Society. Dr. Suehs and Paul Robison, who were active in the discussion of the talk, agreed that emphasis should be placed on the need for early diagnosis and prompt removal of foreign objects before they cause undue damage to tissues of the food and air passages.

The president announced the appointment of S. W. Bohls as chairman of the cancer control program and of C. P. Hardwicke, Oliver Suehs, and Joe T. Gilbert as members of the public relations and legislative committee.

February 8, 1949

(Reported by M. Allen Forbes, Secretary)

Hypogastric Sympathectomy for Dysmenorrhea—Samuel P. Todaro, Austin.

Discussion—W. B. Hahn and E. K. Blewett, Harold Williams, and Edward Zidd, Austin.

Travis County Medical Society met February 8 in Austin. Samuel P. Todaro spoke on the subject named above.

J. E. Kreisle and George Tipton were elected to membership. J. Edward Johnson, president, asked for the cooperation of each doctor in the furtherance of the passing of the Minimum Standards bill.

Sam Key, Sr., reported that the deed to the lot purchased by the society as the building site for the State Medical Association central office was presented to the officers of the Association at their meeting in Austin in January. An invitation was extended to members of the Association to attend meetings of the Travis County Society when they are in Austin.

Williamson County Society

January 12, 1949

Surgical Aspects of Gastric Ulcer—Raleigh White, Temple.

Members of Williamson County Medical Society, meeting January 12 in Taylor, heard Raleigh White, Temple, discuss the subject named. He said that a large number of gastric ulcers were cancerous and urged every effort to recognize them at an early date. A dinner for members and their wives preceded the meeting.

Auxiliary Section

NATIONAL CONVENTION TO BE IN JUNE

The Woman's Auxiliary to the American Medical Association will meet in Atlantic City, N. J., June 6-10, in conjunction with the annual session of the American Medical Association. Headquarters for the auxiliary will be Haddon Hall, and requests for reservations should be sent at once to Dr. Robert A. Bradley, Chairman, Subcommittee on Hotels, 16 Central Pier, Atlantic City.

NATIONAL LEGISLATION STUDY

Measures now before the Congress would provide for compulsory sickness "insurance" and are therefore of great concern to members of the Woman's Auxiliary to the State Medical Association, Mrs. A. B. Pumphrey, Fort Worth, chairman of the Committee on Legislation, declares. Mrs. Pumphrey is urging each county auxiliary to form a study group to become better informed about the medical and health measures being considered by the national lawmakers so that the auxiliary members can help interpret the measures to their friends and to other organizations.

Dr. George A. Schenewerk, Dallas, has been appointed chairman for Texas of the National Education Campaign of the American Medical Association. A statewide plan for bringing to the public the story of American medicine, the importance of voluntary prepayment medical care plans, and the disadvantages of a national compulsory sickness insurance program is being formulated. Mrs. Pumphrey points out that members of the Auxiliary will soon receive additional information about the education campaign and should be prepared to assist in it.

Officers of the Woman's Auxiliary to the State Medical Association of Texas: President, Mrs. S. M. Hill, Dallas; President-Elect, Mrs. Joseph B. Foster, Houston; First Vice-President (Organization), Mrs. O. W. Robinson, Paris; Second Vice-President (Physical Examination), Mrs. Robert F. Thompson, El Paso; Third Vice-President (Hygeia), Mrs. J. C. Terrell, Stephenville; Fourth Vice-Presidents (Program), Mrs. Edward W. Coyle, San Antonio; Corresponding Secretary, Mrs. Cecil O. Patterson, Dallas; Recording Secretary, Mrs. R. E. Clark, Memphis; Treasurer, Mrs. V. M. Longmire, Temple; Publicity Secretary, Mrs. H. S. Renshaw, Fort Worth; Parliamentarian, Mrs. J. C. Sharp, Corpus Christi.

AUXILIARY NEWS

Anderson-Houston-Leon Counties Auxiliary

Ten women were present when Anderson-Houston-Leon Counties Auxiliary was organized February 16 and officers were elected. They are Mesdames Delbert Brown, Crockett, president; Harvey Bell, Palestine, vice-president; Jack Goolsby, Crockett, secretary-treasurer; and John L. Dean, Jr., Crockett, reporter and recording secretary. Mrs. Paul B. Stokes, council woman of District 11, was present to assist with the organization.—Mrs. Paul B. Stokes.

Angelina County Auxiliary

Seven members of Angelina County Auxiliary and two guests, Mrs. Ada Smith and Mr. Kester Denman, were entertained with a breakfast given by Mrs. Kate Hawkins, Lufkin, in January. Mr. Denman, an attorney, led a panel discussion on socialized medicine, pointing out its evils. He stressed the necessity of recognizing the danger it presented and voting it down.—Mrs. T. A. Taylor.

Bexar County Auxiliary

Wives of guest speakers at the International Post-Graduate Medical Assembly of Southwest Texas in San Antonio were entertained with a cocktail supper by Bexar County Auxiliary on January 25. Mrs. Herbert Hill served as social chairman. Mrs. Tom Sharp and Mrs. D. A. Todd were in charge of decorations, and Mrs. Willis Allin of reservations. Mrs. B. H. Passmore, the wives of the guest speakers, and the wives

of the local sponsors of the assembly formed the receiving line.

Members of Bexar County Auxiliary were entertained with a Chinese Brunch on February 11 at the Medical Library in San Antonio. Mesdames G. G. Passmore, W. Heck, and Frank S. Gilbreath served as hostesses, and Mrs. J. A. Watts was program chairman. Dr. Alfred H. Hill, guest speaker from the medical society, talked on "Health and Emotions."

New officers of the auxiliary are Mrs. M. A. Ramsdell, president; Mesdames Royall M. Calder, Ralph Leteer, Roy G. Giles, and W. J. Fetzer, vice-presidents; Mrs. Alfred Brever, recording secretary; Mrs. F. Perry Post, corresponding secretary; Mrs. Dudley Jackson, Jr., publicity secretary; Mrs. R. E. Fisher, treasurer; Mrs. Walter Walthall, auditor; and Mrs. S. Foster Moore, historian.—Mrs. C. C. Shotts, Publicity Chairman.

Bowie County Auxiliary

Bowie County Auxiliary met recently at the home of Mrs. A. A. Little in Texarkana with Mrs. Brooks Tate as co-hostess. Mrs. William Hibbitts, program leader, introduced Mrs. Andrew Rose, who spoke on "The Legal Status of Women." Refreshments were served from a table centered with jonquils, iris, and salvia. Mrs. Roy Baskett presided at the silver service and Mrs. Harry Murry served salad.—Mrs. Chester E. Kitchens.

Brazoria County Auxiliary

Brazoria County Auxiliary met January 27 in Angleton for dinner with the medical society. Following dinner the auxiliary met separately with ten members and one guest present, and a round-table discussion of socialized medicine and the Minimum Standards bill was conducted. It was voted to bring in a speaker at a later meeting to give more information about these two subjects.—Mrs. William C. Holt.

Cherokee County Auxiliary

Seventeen members of Cherokee County Auxiliary were present when the group met for dinner the evening of January 25 at the home of Mrs. C. H. Stripling, Jacksonville. Mrs. George Hilliard and Mrs. W. H. Steffens were hostesses with Mrs. Stripling.

Following dinner election of officers was held. Those who will serve are Mrs. C. L. Jackson, Rusk, president; Mrs. L. L. Travis, Jacksonville, vice-president; Mrs. M. E. Huff, Rusk, corresponding secretary; Mrs. Collier Rucker, recording secretary; Mrs. Marvin Lamb, Jacksonville, reporter; and Mrs. W. H. Sory, Jacksonville, historian.

Dallas County Auxiliary

Dallas County Auxiliary met February 2 for a luncheon and heard Mrs. Eleanor Baird Campbell review the play "John Loves Mary." Mrs. Harold Block, program chairman for the meeting, introduced the speaker.—Mrs. Harry B. Sowers, Publicity Chairman.

Galveston County Auxiliary

A morning game program followed by a buffet luncheon highlighted the January 18 meeting of Galveston County Auxiliary. Mrs. H. C. Slocum and Mrs. S. R. Snodgrass were in charge of luncheon arrangements and Mrs. Charles E. Lankford of decorations. An added attraction was Mrs. E. S. McLarty's showing of her collection of pewter.

Grayson County Auxiliary

Grayson County Auxiliary elected officers at a Valentine luncheon meeting February 11. Those who will serve are Mrs. John Gleckler, Denison, president; Mrs. Frank Sporer, Van Alstyne, first vice-president; Mrs. J. H. Carraway, Sherman, second vice-president; Mrs. F. F. Fowler, Denison, secretary; Mrs. John Ellis, Sherman, treasurer; and Mrs. Max Woodward, Sherman, parliamentarian. Mrs. John Ellis was in charge of decorations. Twenty members were present. —Mrs. Stanley Monroe.

Harris County Auxiliary

Harris County Auxiliary met in Houston for lunch January 31. Mrs. D. Truett Gandy, program chairman, reviewed a book, "How Never to Be Tired," and a business session was held.—Mrs. Thomas L. Royce.

Hunt-Rockwall-Rains Counties Auxiliary

Members of Hunt-Rockwall-Rains Counties Auxiliary were entertained in the home of Mrs. Fred Peak, Greenville, in January with Mesdames Wendel Pool, Ralph W. Jenks, B. F. Arnold, and Fred Turbeville as co-hostesses. Mrs. Arnold presided in the absence of the president, Mrs. Frank Little. During the meeting recognition was given Mrs. Little for her outstanding work during the past year in the tuberculosis drive. Mrs. M. L. Wilbanks conducted a devotional and a social hour was held. The scheduled speaker was unable to be present. Guests attending were Mrs. J. L. Pollock, Hedrick, Okla., and Mrs. Myrick L. Monroe.

Jefferson County Auxiliary

A luncheon meeting was held by Jefferson County Auxiliary on January 18 in Port Arthur, and Dr. L. R. Byrd, Jr., Port Arthur, discussed the Minimum Standards bill. Mrs. L. C. Carter, Port Arthur, served as leader of the day and Mrs. John White, Jr., Port Arthur as hostess chairman.

Mrs. F. W. Sutton presented a motion to divide the auxiliary into two working chapters, and Mrs. L. R. Byrd, Jr., president, appointed a committee to study the motion and make a recommendation at the February meeting.—Mrs. R. T. Lombardo, Publicity Secretary.

Kerr-Kendall-Gillespie-Bandera Counties Auxiliary

The resignation of Mrs. C. S. Livingston, Kerrville, as president of Kerr-Kendall-Gillespie-Bandera Counties Auxiliary was accepted at the meeting of the auxiliary January 7 at the home of Mrs. J. D. Jackson, Kerrville. Mrs. C. B. Matthews, Kerrville, second vice-president, was named to succeed Mrs. Livingston, who is moving to Dallas.

Announcement was made that a portable x-ray unit would be in Kerrville the following week, and members of the auxiliary were urged to have chest examinations. Mrs. Livingston and Mrs. David McCullough, Kerrville, discussed the importance of such examinations.

Upon motion by Mrs. McCullough, the auxiliary decided to have a committee go through the old files of the organization and discard those items which were no longer of importance. Mrs. A. P. Allison, Mrs. Matthews, Mrs. H. H. Gallatin, and Mrs. D. E. Packard were appointed to the committee.

Mrs. Allison reported that the Kerrville radio station would sponsor a health program for lay listeners, and she was directed to cooperate with the station in working out the program.

Mrs. McCullough was appointed chairman of the nurse recruitment program and was requested to make arrangements with a nurse to speak to girls at the high school, about entering nurse training.

Dr. Roger Hibbard, chief of tuberculosis service at the veterans hospital at Legion, was introduced by Mrs. Allison and spoke on "Tuberculosis and Civilization." A social hour followed.

Mesdames H. H. Gallatin, C. L. McClellan, Roger Stevenson, C. C. Jones, Sr. of Comfort, and D. E. Packard were co-hostesses.

Twenty-nine members were present when Kerr-Kendall-Gillespie-Bandera Counties Auxiliary met February 4 at the home of Mrs. David McCullough in Kerrville. Mesdames Mara Green, J. B. DesRochers, W. E. Gregg, and A. P. Allison, all of Kerrville, were co-hostesses.

Mrs. S. E. Thompson reported that 6,374 persons had chest x-rays made when the mobile x-ray unit was in Kerrville. The resignation of Mrs. Thompson as chairman of the Seal Sale Committee and of the Easter Gifts for the Negro Sanatorium Committee was accepted. Mrs. Gregg moved that a committee be named to investigate and name a chairman for the Seal Sale Committee and the action was taken.

It was reported that the Library of the State Medical Association needs funds and Mrs. L. B. Crumrine moved that the members contribute $1 each toward it. Mrs. Roger Stevenson seconded the motion and Mrs. Thompson offered to donate the same amount as the auxiliary which amounted to $29.

A talk on "Why Should I Make a Will" was given by Mrs. J. W. Burkett, Jr., and a social hour followed.—Mrs. D. E. Packard, Secretary.

Nueces County Auxiliary

Nueces County Auxiliary held an Observance Program beginning February 7 and continuing through February 18. The purpose of the program was to inform residents of Corpus Christi on medical and clinical advances in recent years. The members of the auxiliary acted as sponsors for local women who were shown through eleven charity clinics and the local blood bank while members of the clinic staffs explained the activities of each unit.

Mrs. A. J. Ashmore, co-chairman of the Observance Program, was hostess in her home for a tea February 18 for all women who participated in the program, either as sponsors or as visitors.

Orange County Auxiliary

Orange County Auxiliary was entertained in the home of Mrs. C. B. Shaddock, Orange, on January 11, with Mrs. M. E. White as co-hostess. New officers elected are Mesdames G. Y. Swickard, president; C. M. Covington, vice-president; M. E. White, secretary-treasurer; and T. O. Woolley, parliamentarian. Refreshments were served.

Rusk-Panola Counties Auxiliary

Members of Rusk-Panola Counties Auxiliary met with the medical societies for dinner in Henderson on January 18. Dr. Thomas M. Jarmon, Tyler, was the speaker for the evening, and fifteen members of the auxiliary met separately following the program.—Mrs. K. C. Prince, Reporter.

Smith County Auxiliary

Officers were elected by Smith County Auxiliary at its February meeting at the home of Mrs. Lawrence Neill, Tyler. Those who will serve are Mesdames Glynne Brown, president; Ben Wilson, vice-president; Jim Vaughn, recording secretary; Robert Marshall, corresponding secretary; and George Allen, treasurer.

Mrs. E. H. Caldwell, program chairman for the meeting, introduced Mr. Calvin Clyde, Jr., who spoke on "What the Doctor's Wife Can Do To Help Her Husband."

A social hour followed with Mrs. Ben Wilson presiding at the coffee service and Mrs. Lex Neill and Mrs. Jim Vaughn acting as co-hostesses.—Mrs. C. E. Willingham.

Wichita County Auxiliary

A Valentine luncheon and musical program were held by Wichita County Auxiliary on February 8 in Wichita Falls. Dr. Martha Buchanan, Wichita Falls, spoke on "National Compulsory Health Insurance," and Mrs. Dolores Welch Sherler, soprano, accompanied by Miss Jeannine Dearman, sang several folk songs.

Officers were elected as follows: Mesdames W. K. Rundell, president; R. L. Daily, vice-president; Nolan Simmons, recording secretary; W. L. Parker, corresponding secretary-treasurer; J. A. Little, parliamentarian and critic; and Richard Nelson, historian. Approximately fifty members were present.

Hostesses were Mesdames G. J. Seibold, Gordon Clark, Roland Knox, Irving Humphrey, Edwin Bebb, L. N. Simmons, H. D. Mansur, J. T. Lee, and H. H. Terry.—Mrs. Joseph G. Pasternack, Publicity Chairman.

Williamson County Auxiliary

Williamson County Auxiliary was organized following a dinner for members of the medical society and their wives in Taylor on January 12. Officers elected are Mesdames E. R. Leggett, president; B. A. Kirkpatrick, vice-president; Seth Ward Lehmberg, secretary-treasurer; E. W. Stromberg, parliamentarian; and W. R. Swanson, publicity chairman. Mrs. R. A. Cooper, Austin, council woman of District 7, was present to assist with the organization.

Fourteenth District Auxiliary

Twenty-one women of the Fourteenth District Auxiliary braved rain, cold, and slick roads to attend a meeting of the auxiliary in Waxahachie on January 11.

Mrs. O. M. Marchman, Dallas, led a discussion stressing the importance of wives of doctors keeping themselves informed so that they can give authentic information about compulsory health insurance and other health matters when questions arise in community groups. Reports from several county auxiliaries were given. Mrs. E. Truett Crim, Greenville, said that the Hunt-Rockwall-Rains Counties Auxiliary had mailed 5,000 letters with tuberculosis Christmas seals, resulting in a collection of $2,000. Mrs. G. F. Goff, Dallas, gave details of a class for pregnant women conducted at the Dallas Health Museum as a project of the Dallas County Auxiliary.

Officers of the district auxiliary were elected as follows: Mrs. E. Truett Crim, Greenville, president; Mrs. Doak Blassingame, Sherman, vice-president; and Mrs. Joseph Longino, Sulphur Springs, secretary-treasurer.—Mrs. Cecil O. Patterson, President.

AUXILIARY DEATHS

Mrs. D. W. (Tillie) Childers, Lufkin, a charter member of Angelina County Auxiliary, died January 9, 1949, in Houston after a short illness. Mrs. Childers, long active in church, club, and civic activities, is survived by her husband, Dr. Childers; two sons, Dr. M. A. Childers, Harlingen, and King P. Childers, Waynesboro, Miss.; three daughters, Mrs. Ester Strickland, Oklahoma City; Mrs. Vernon Glenn, Lufkin; and Mrs. Oscar Crofford, Memphis, Tenn.; two brothers, George Harris and Ausburn Harris, both of Jasper; a sister, Mrs. John Broderick, Lufkin; and six grandchildren and three great grandchildren.

Mrs. B. C. Wallace, Athens, granddaughter, daughter, wife, and sister of physicians, died December 27, 1948. She was an active member of the Henderson County Auxiliary, Methodist Church, and Current Literature Club, and past matron of the Eastern Star and past president of the Parent-Teachers Association. The widow of the late Dr. B. C. Wallace, Mrs. Wallace is survived by one daughter, Mrs. Paul E. Cochran, Dallas; a brother, T. H. Campbell, Amarillo; a sister, Mrs. H. B. Nash, LaRue; and three grandsons.

Deaths

W. A. LEE

Dr. William Arthur Lee, Denison, Texas, died December 20, 1948, of coronary infarction.

Born April 21, 1881, in St. Jo, Texas, Dr. Lee was the son of "Babe" and Maria Lee. He received his early education in the St. Jo schools and his medical education at the University of Texas School of Medicine, Galveston, from which he was graduated in 1906. He practiced for two years at Illinois Bend, two years with the Lufkin Land and Lumber Company in Lufkin, six years at Garden City, and thirty-one years at Denison. He was division surgeon at the

DR. W. A. LEE

Katy Employes Hospital in Denison on two occasions and for many years was active in the operation of the City Hospital, now Madonna Hospital, being chairman of the board at the time of his death.

Almost continuously since 1908 Dr. Lee had been a member of the State and American Medical Associations, through Montague, Angelina, and then Grayson County Medical Society. He served two terms as president of the Grayson County Society, nine years as its secretary, and twelve years as a delegate to the State Medical Association. He was a past president of the Fourteenth District Medical Society and was vice-president of the State Medical Association in 1939. He was vice-councilor of the district at the time of his death. He was also a past president of the Texas Railway and Traumatic Surgical Association. During World War I he was a captain in the Army Medical Corps, serving overseas with the American and British forces. He was a member of the Elks and Masonic Lodges, and a charter member and the first president of the Denison Lions Club, past patron of the Order of the Eastern Star, and past commander of American Legion Post 62.

Dr. Lee married Miss Ruth Jones on December 26, 1906, in St. Jo. He is survived by his wife; one daughter, Mrs. A. B. Reese, Houston; two sisters, Mrs. M. H. Read, Grand Prairie, and Mrs. W. S. Dean, Lovington, N. Mex.; one half brother, J. T. Poindexter, Parsons, Kan.; and one granddaughter, Ruth Reese, Houston.

B. C. SMITH

Dr. Benjamin Clinton Smith, Hillsboro, Texas, died January 11, 1949, at his home of coronary occlusion.

Born July 16, 1875, in Alabama, Dr. Smith was the son of Walton C. and Mary (Hugley) Smith. He attended Denton Normal School, Denton, Texas, and was graduated in 1909 from the University of Texas School of Medicine, Galveston. He began his practice in Brandon, where he lived until April, 1918, at which time he entered the U. S. Army Medical Corps, serving as a lieutenant during the

DR. BEN C. SMITH

remainder of World War I. Following his separation from the service in 1919, he moved to Hillsboro and in later years was associated there with his son, Dr. Nellins C. Smith.

Dr. Smith was a member of the American Medical Association and the State Medical Association, through Hill County Medical Society, continuously from 1910 to 1948. He served as vice-president of the State Medical Association in 1933, had been president of the Twelfth District Medical Society, and had held several offices including that of president in the Hill County Medical Society. He was a charter member of the Hillsboro Rotary Club, had twice served as president, and had a record of twenty-five years perfect attendance. He was a Mason, a member of the American Legion, and a member and a deacon of the First Baptist Church, for which he had served on several occasions as chairman of the board.

On December 13, 1903, Dr. Smith married Miss Emma White of Irene, who survives. Other survivors include two sons, Belo G. Smith and Dr. Nellins C. Smith, Hillsboro;

a daughter, Mrs. E. J. Pruitt, Jr., Corpus Christi; his mother, Mrs. Mary Smith, Hillsboro; six brothers, six sisters, and three grandchildren.

H. M. McDANIEL

Dr. Horace MacField McDaniel, May, Texas, died January 2, 1949, in a Stephenville hospital of multiple myeloma.

The son of J. A. and Martha (Henslee) McDaniel, Dr. McDaniel was born January 9, 1881, in May. He attended schools in May and was graduated from the Medical Department of old Fort Worth University in 1905. He later

DR. H. M. MCDANIEL

did postgraduate work at New York Polyclinic, New York. Dr. McDaniel practiced in May from 1905 to 1944, when he accepted the position of superintendent of the Austin State School Farm Colony. He resigned in October, 1948, because of ill health and moved to Stephenville.

Dr. McDaniel was a member of the American Medical Association and State Medical Association, through Brown-Comanche-Mills-San Saba Counties Medical Society, which he had served as president. He had been a member for thirty-four years of the May school board, a member of the First Methodist Church since 1900, and superintendent of its Sunday School for ten years. He was also a Mason.

On July 1, 1906, in May, Dr. McDaniel married Miss Clyde Lillian Mayo, who died in 1910. They had one daughter, Mrs. F. H. Moore, Stephenville. He married Miss Myrtie L. Snipes on September 10, 1912, in May. Survivors include his wife; two sons, Dr. MacField McDaniel, Pampa, and James C. McDaniel, Phillips; the daughter, Mrs. Moore; a sister, Mrs. Minnie Cook, Uvalde; and five grandchildren.

T. C. McCURDY

Dr. Thomas Clifton McCurdy, Archer City, Texas, died December 16, 1948, in Waco.

Born in 1877 in Pittsburg, Texas, Dr. McCurdy was the son of Thomas and Caroline (Gordon) McCurdy. He attended the University of Texas, Austin, and was graduated from the University of Texas School of Medicine, Galveston, in 1903. During most of his professional career he practiced in Archer City, where, in 1927, he built the Archer Hospital, which he maintained until his retirement in 1945. He was health officer for Archer County and had also been assistant house surgeon in the Texas and Pacific Hospital in Marshall. During World War I, Dr. McCurdy served as a captain in the medical corps of the U. S. Army, stationed at Fort Oglethorpe and Fort McPherson, Ga., and was commandant of the 154th base hospital. During World War II he was medical examiner for selective service in Archer County.

Dr. McCurdy had been a member for twenty-five years of the American Medical Association and the State Medical Association, first through Harrison County Medical Society, then through Eastland-Callahan Counties Medical Society, and, most recently, through Wichita County Medical Society. He was a member of the American Legion and the First Baptist Church.

Survivors include Dr. McCurdy's wife, Mrs. T. C. McCurdy, Rising Star; two sons, Thomas G. McCurdy and John McCurdy, Rising Star; two daughters, Miss Betty McCurdy, and Mrs. Richard L. Nelson, Wichita Falls; two brothers, Dr. Carl McCurdy, Marshall, and Dr. W. C. McCurdy, Purcell, Okla.; a sister, Mrs. Fayette Copeland, Tulsa, Okla.; and three grandchildren.

GRIFF ROSS

Dr. Griff Ross, Mount Enterprise, Texas, died December 15, 1948, of nephritis.

Dr. Ross was born December 29, 1880, in Mount Enterprise, the son of W. G. and Dora T. Ross. After receiving his early education in Mount Enterprise, Dr. Ross devoted his attention primarily to farming, ginning, railroading, and pharmacy. Meanwhile, he studied medicine at home under a physician, later attended Memphis Hospital Medical Col-

DR. GRIFF ROSS

lege in Memphis, Tenn., and finally was graduated in medicine at Baylor University College of Medicine, Dallas, in 1915. He served an internship at Baylor Hospital, Dallas, before returning to his birthplace to practice.

Almost continuously since 1916 Dr. Ross was a member of the Rusk County Medical Society, State Medical Association, and American Medical Association. He was an elder in the Presbyterian Church from 1902 until his death, and served four years as clerk of the session in the Mount Enterprise church. He was a member of the Woodmen

of the World, Masonic Lodge, and Odd Fellows, and had been a member of the Mount Enterprise school board. Dr. Ross was interested in intensive farming and won third prize for his crop record in a contest sponsored by the Dallas *News* to produce "More Cotton on Fewer Acres." He came from a family of physicians; except for a period of seventeen years, there has been a doctor in his family for more than one hundred years.

On December 25, 1918, Dr. Ross married Miss Hazel Duke in Cushing. His wife; two sons, Dr. Griff Terry Ross and William Ferdinand Ross; two brothers, W. G. Ross, Jr., and Charley Ross; and one sister, Mrs. J. D. Irwin, all of Mount Enterprise, survive.

J. E. STOVER

Dr. Joseph Ever Stover, Truscott, Texas, died of coronary occlusion in a Quanah hospital December 29, 1948.

The son of Mart and Sarah (Clark) Stover, Dr. Stover was born July 9, 1877 at Little Elm, Denton County, Texas. He was graduated in medicine from the University of Nashville, Nashville, Tenn., in 1900 and returned to Little Elm to begin practice. In 1910 he moved to Denton, in 1920 to Truscott, in 1935 to Friona, and in 1940 back to Truscott.

Throughout most of his professional career Dr. Stover was a member of the State Medical Association and American Medical Association through his local county medical society, most recently through the Hardeman-Cottle-Foard-Motley Counties Medical Society. In 1947 he was elected

DR. J. E. STOVER

to honorary membership in the State Medical Association. He was also a member of the Third District Medical Society. He had served as county health officer in Denton, Knox, and Parmer Counties and was medical examiner for Selective Service in Parmer County. He was a member of the Christian Church.

In August, 1900, Dr. Stover married Miss Sarah Della Sorrells, who preceded him in death in 1933. He is survived by a second wife, the former Mrs. Mary Kate McDonald, whom he married August 15, 1934, in Amarillo; two daughters, Mrs. Elizabeth Chowning, Vernon, and Mrs. Mary Emma Wohlford, Houston; three sisters, Mrs. W. P. Parker, Wichita Falls; Mrs. Pat Gallagher, Dallas; and Mrs. S. S. Boyd, Denton; one brother, J. A. Stover, Kerrville; two granddaughters; and two great grandsons.

E. W. WRIGHT

Dr. Elbert William Wright, Bowie, Texas, died suddenly at his home January 3, 1949, of a heart attack.

The son of Sherod and Sarah Francis (Bostick) Wright, Dr. Wright was born in Magnolia Springs on August 5, 1887. He attended Baylor University, Waco, and received his doctor of medicine degree from the Medical Department of old Fort Worth University in 1910. He later did post-

DR. E. W. WRIGHT

graduate work in Chicago, Rochester, Minn., and New Orleans. His internship was served at the Illinois and Great Northern Hospital, Palestine, and he began his practice in Sunset in 1910. During World War I he served as a lieutenant in the Army Medical Corps, moving after his discharge to Bowie, where, in 1922, he built and operated the first hospital in Montague County, the Wright Sanitarium. In 1926 he built the Bowie Clinic Hospital, which he operated until 1947, when he retired as head of the organization, acting instead as consultant. He specialized in surgery.

Dr. Wright had been a member for thirty-seven years of the American Medical Association and the State Medical Association, through Clay-Montague-Wise Counties Medical Society. He was also a fellow of the American Medical Association. In 1940 he served as secretary of the Section on Public Health of the State Medical Association and in 1944 as vice-president of the Association. He was president of Clay-Montague-Wise Counties Medical Society in 1938 and 1945 and had been president of the Thirteenth District Medical Society. Dr. Wright was on the State Board of Health for sixteen years after his original appointment in 1926; he served as chairman from 1935 to 1937. He was a charter member and past president of the Bowie Rotary Club, a member and past president of the Chamber of Commerce, a Mason, and a Shriner. He was a member and former chairman of the Board of Stewards of the First Methodist Church. Dr. Wright was interested in the welfare of the community and helped many boys and girls further their education.

In 1911 Dr. Wright married Miss Laura Ann Walters, who survives. Also surviving is one brother, Lester Wright, Kirbyville.